

**WIPO ONE YEAR LATER: ASSESSING CONSUMER
ACCESS TO DIGITAL ENTERTAINMENT ON THE
INTERNET AND OTHER MEDIA**

HEARING
BEFORE THE
SUBCOMMITTEE ON TELECOMMUNICATIONS,
TRADE, AND CONSUMER PROTECTION
OF THE
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HOUSE OF REPRESENTATIVES

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WIPO ONE YEAR LATER: ASSESSING CONSUMER ACCESS TO DIGITAL ENTERTAINMENT ON THE INTERNET AND OTHER MEDIA

THURSDAY, OCTOBER 28, 1999

HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON TELECOMMUNICATIONS, TRADE,
AND CONSUMER PROTECTION,
COMMITTEE ON COMMERCE,
Washington, DC.

The subcommittee met, pursuant to notice, at 10 a.m., in room 2123, Rayburn House Office Building, Hon. W.J. "Billy" Tauzin (chairman) presiding.

Members present: Representatives Tauzin, Oxley, Stearns, Cox, Shimkus, Wilson, Markey, Boucher, Gordon, Eshoo, Engel, Sawyer, and McCarthy.

Staff present: Justin Lilley, majority counsel; Cliff Riccio, legislative clerk; and Andrew W. Levin, minority counsel.

Mr. TAUZIN. The committee will please come to order. We will ask our guests to take seats, please.

Today on the anniversary day of the enactment of the Digital Millennium Copyright Act, we need to assess the availability to consumers of entertainment products delivered over the Internet and via traditional forms of media. We also, of course, today mark the extraordinary victory of the Yankees last night in the World Series.

I was mentioning to my good friend, Mr. Markey, who has suffered through this post-season, that it wasn't the first time the Yankees burned Atlanta to the ground and probably won't be the last.

Through this oversight hearing, we hope to get a better sense of whether the DMCA has provided the necessary legal framework for electronic commerce to flourish. The subcommittee also seeks to determine whether it should take additional steps to resolve any remaining obstacles to the rollout of digital television, to new digital video and audio recording products, and to new digital entertainment products.

In the last Congress, this subcommittee, I think, made important changes to WIPO, and in our implementing legislation literally, I think, improved the condition of WIPO as it was proposed by the Clinton administration.

One of the most contentious issues involved the scope of anti-circumvention provisions of the Act. As my colleagues will recall, we

sought to clarify ambiguities in the legislation produced by our colleagues in the Senate, as well as to make certain that the bill outlawed only black boxes and not staple articles of commerce such as PCs and VCRs. In doing so, we sought to ensure that copyright owners would have all of the necessary legal tools to combat cyber piracy and without stifling the growth of electronic commerce.

Today we will get a preliminary assessment of whether we have achieved that goal. Since 1981 a debate has been underway about home taping. Eighteen years ago this month, the 9th Circuit Court adopted a decision that would have kept the Betamax recorder from coming to the market. Fortunately, as I think everyone will agree, the Supreme Court ended up reversing that decision.

Nevertheless, as a quick review of the testimony shows, the home taping debate continues even today. Consumer electronic companies, consumer computer companies want to bring new recording products to market. Entertainment companies continue to worry about the capacities and the capabilities of these devices.

I would hope we would soon reach common ground on these contentious issues. As long as we recognize that consumers have both longstanding interest in being able to record television and other programs for time shifting purposes and that entertainment companies have an interest in protecting against piracy, we should, hopefully, find some meeting of the minds on this subject.

Today we will see a demonstration of powerful new encryption technology that will help motion picture studios guard against the theft of their movies. As long as this technology is not used in ways that would frustrate legitimate consumer expectations, it should provide valuable assistance to the studios seeking to combat cyber piracy.

We need to make sure we keep the interests of consumers foremost in our minds. Our constituents, after all, are the ones who purchase these products and who contribute to the growth of not only electronic commerce but of the wonderful companies who produce these products for our enjoyment.

I want to welcome our witnesses today. We have an extraordinary qualified and competent panel before us, a large one, as we usually do. We have a rule that your written statements are automatically a part of our record without objection, and is so ordered, and we would encourage you when we get to the point where we finally are listening to you that you summarize your statements to us in conversational presentation, if you can.

As we move forward, we will welcome as well your recommendations on how the subcommittee might help you in your efforts to bring new products to the market and to rationalize some of these contentious issues regarding protection and consumer rights.

The Chair is now pleased to welcome and recognize the ranking minority member, my friend from Massachusetts, Mr. Markey, for opening statement.

Mr. MARKEY. Thank you, Mr. Chairman, very much. Thank you for having this hearing, and happy anniversary to you, Mr. Chairman. Happy anniversary to all of you on the first anniversary of WIPO legislation passing. This is a big celebration. We should have a cake or something here. We should have something celebrating this bill. It was such a momentous occasion.

What better way to celebrate than have all of our friends who were here for almost a whole year talking to us and explaining to us the importance of the legislation. So this is probably the best way in which we could celebrate, having all of our friends in here today. I'm sure they feel the same way.

This legislation, the Digital Millennium Copyright Act, implemented two WIPO treaties. The law is designed to give copyright owners enhanced copyright protection in the digital environment.

In deliberating upon this legislation last year, the Commerce Committee sought to balance many competing interests. This was not an easy task. Encryption research issues, privacy implications, their use, rights, reverse engineering, and other issues were very complicated.

Yet they represented meaningful public policy perspectives, and I believe that we succeeded in crafting for each area policies that were fair and balanced.

In addition, the legislation ensured ongoing access to copyrighted works under the so called "Fair Use" doctrine, permitting consumer electronic manufacturers, computer and telecommunications companies to design and produce devices and services for consumers in these new digital technologies and digital formats.

As the digital revolution sweeps over industries and countries, it will provide new opportunities for market growth and innovation, easier access to remote information, and new distribution channels for products and services. The Digital Millennium Copyright Act tried to take advantage of the rapid technological change afoot while striking a balance that will establish the United States a clear lead in the world in creativity and innovation in both digital software and in the hardware to utilize these new formats.

Today's hearing gives us an excellent chance to gauge our progress as a nation in these key sectors of our economy.

Again, I commend you, Mr. Chairman, for making it possible for us to celebrate this very important anniversary and at this point, looking forward to hearing from our witnesses, I yield back the balance of my time.

Mr. TAUZIN. I thank my friend.

The Chair is now pleased to recognize the gentleman from Illinois. By the way, we celebrated, Mr. Markey, the signing of the E911 bill by the White House, which is a big accomplishment of our committee, and Mr. Shimkus' bill is now the law of the land, and we should recognize him for that effort and, I think, recognize the importance of that bill for America.

The gentleman from Illinois, Mr. Shimkus.

Mr. SHIMKUS. Thank you, Mr. Chairman. On that note, I want to thank the gentleman from Massachusetts for his help in that victory for us, and there is more work to be done, we know, and we look forward to going at it again.

I also want to welcome my colleague from the 110 percent club for our long duration and the march we did last night, to be here punctual and on time to move to a new area and new arena. I was trying to wipe the cobwebs from my mind on what we did yesterday in Energy De-Reg, and now we are moving into the WIPO area.

Mr. MARKEY. Will the gentleman yield?

Mr. SHIMKUS. I will.

Mr. MARKEY. Even though I lost every one of my amendments last night until eleven o'clock at night, it was preferable to watching the Yankees win the World Series again. So I was actually glad to be in that mark-up all night.

Mr. SHIMKUS. So I think it's fitting, since I'm still trying to figure out what we did yesterday, that you do take time to review what we did last year and where we're at with the industries and with the international treaties.

So I look forward to the hearing, I look forward to listening to the testimony, and hopefully, offering some questions and help clarify some issues for me. I welcome our guests and, Mr. Chairman, I yield back my time.

Mr. TAUZIN. I thank the gentleman.

The Chair is now pleased to recognize the gentleman from Virginia.

Mr. BOUCHER. Thank you very much, Mr. Chairman. I want to commend you for organizing a hearing on a very timely subject.

During the course of the last Congress, this committee made a major contribution to the enactment of the World Intellectual Property Treaty Organization implementing legislation. Solely because of this committee's efforts, a reasonable balance was struck between the rights of copyright owners and the rights of information consumers.

We preserved our nation's commitment to the principle of fair use while giving content owners new legal tools in order to protect their intellectual property interests in the digital era. Our provisions also protected equipment manufacturers from unwarranted lawsuits as they bring to the market useful new consumer electronics and computer products.

Today we take stock of developments over the course of the past year and, unfortunately, one persistent controversy apparently remains unresolved. Notwithstanding the Supreme Court's decision 15 years ago in the Betamax case that sanctioned the ability of VCR owners to engage in home television taping for purposes such as time shifting, the debate over home taping continues to this day.

Equipment manufacturers want to bring to market new digital video recording products. Consumers want to purchase these new products, but the motion picture companies are interested in limiting the recording capabilities of these new devices, and consumers are having to wait for yet another debate to be resolved before these products reach the market. Even the rollout of high definition television is being delayed as a consequence of this controversy.

This is not a new issue for the subcommittee. In fact, we balanced these very concerns when we enacted Section 1201(k) of the WIPO legislation, which relates to analog recording devices.

We established a common sense rule. In those instances in which a video product is obtained by the consumer as part of a bargained for exchange in which the consumer should have no reasonable expectation of being able to make a copy, the Macrovision copy blocking technology can be applied, and all new analog VCRs were required to respond to the Macrovision copy blocking technology.

Under Section 1201(k) copyright owners are empowered to apply Macrovision to prevent copying of movies that can be rented at

video stores on pre-recorded tapes. In that instance, the consumer who goes to Blockbuster and rents a movie has no reasonable expectation that he will be able to copy that movie, and so applying Macrovision and having the equipment respond to Macrovision is entirely sensible, and no copies can be made.

For movies that are delivered by cable TV through premium subscription services, such as Home Box Office, Section 1201(k) permits the making of one copy, so that programs can be recorded when that program is delivered only once, and the consumer of that program wants to time shift. That is the classic time shifting function which is one of the major uses of VCRs.

For basic cable programs and for free over-the-air TV broadcasts, copyright owners may not use Macrovision to block any copying. This provision effectively codifies the Betamax decision and meets the legitimate expectation of VCR owners that they will be able to record television broadcasts and broadcasts brought to them on basic cable.

Now these are reasonable and balanced rules and, in my view, they should be applied in the context of the new digital recording devices as well.

Unfortunately, the copyright owner community is now attempting to apply the latest copy blocking technology, which is known as 5C, in a manner that could prevent any copying, even the single copy of an HBO movie and perhaps any copying of over-the-air broadcasts. They want to encode all content with the 5C copy blocking technology.

A high amount of uncertainty has resulted. Equipment manufacturers are fearful that, if their machines are built to respond to the new 5C technology, the record buttons on these machines will be useless, because all content will be encoded.

They are fearful, on the other hand, that if their machines do not respond to the new 5C technology, their machines will then be deemed to be circumvention devices under the other provisions of Section 1201 with all of the attendant penalties that apply to the manufacturer, distribution and sale of circumvention devices.

So the new digital recorders are not being manufactured, and consumers do not have access to them. This controversy needs to be resolved, and I propose that the carefully negotiated balance that is contained in Section 1201(k) be the remedy, and I would welcome the comments of our witnesses this morning with regard to that proposal.

Thank you, Mr. Chairman. I look forward to hearing this testimony.

Mr. TAUZIN. The Chair thanks the gentleman again for his always thoughtful remarks. I appreciate them.

The Chair now recognizes the gentlelady from New Mexico, Ms. Wilson, for an opening statement.

Ms. WILSON. Thank you, Mr. Chairman. Starbucks is not in my district, but I wish that it was.

I come to this hearing without the background that my colleague from Virginia has on this issue, but mostly to learn; but I have to say that one of the things that interests me most is the Internet economy and how that is going to change our lives and the way we

work and the way we enjoy ourselves and entertain ourselves, and the way that we learn.

I say that yesterday I got my latest new toy to try out. It's called a soft book, and many of you may have seen them, where you can take with you information that you download from the Internet and carry it with you.

Being one of those in this body who spend about 10 hours a week on an airplane, this is something that I'm very interested in trying out, and the opportunities for people who have information to license that information and to be able to sell books over the Internet without ever committing those books to paper.

There are a lot of tremendous opportunities for commerce, for entertaining ourselves, for informing people, and educating people; and I want to see that work in a way that compensates fairly those who have worked and created those books or those pieces of entertainment while also taking advantage of the new technology available for disseminating them.

Thank you, Mr. Chairman.

Mr. TAUZIN. Would the gentlelady yield a second?

Ms. WILSON. Yes, sir.

Mr. TAUZIN. Just to point out that at the high tech conference we conducted in Baton Rouge this month, one of the presenters—I won't mention his company; I don't want to advertise him, but he presented a system called Clarity which appears to enlarge the size of the script dramatically, even though it doesn't. The mind sees it as larger script and, because it's apparently surrounded by color, it makes the mind more acceptable to electronic script and reading.

Also presented a hard drive disk that he indicated would hold very soon all the books that a child would read from K-1 through college graduation on one little hard drive. Amazing new technologies. The gentlelady is so correct. We haven't yet begun to scratch the surface on the new kinds of products and services that are coming.

I thank the gentlelady.

The Chair is now pleased to welcome the gentleman from Tennessee, Mr. Gordon, for an opening statement.

Mr. GORDON. Thank you, Mr. Chairman. Just quickly, I want to welcome our distinguished panelists today and say that this is a timely occasion to have this hearing, because we are at a point now where our country is facing world record trade deficits, and I'm pleased that we're going to hear from representatives of our No. 1 exporting industry today.

I think, if we are going to try to continue to cut that trade deficit back, we've got to maximize our No. 1 export industry, and that is the products resulting from intellectual property rights. If we're going to do that, we have to have a strong domestic industry.

So I am interested in knowing how we're doing internationally and whether or not we are keeping the kind of domestic market that is going to allow us to still dominate the world in this area.

Thank you.

Mr. TAUZIN. The Chair thanks the gentleman.

The Chair yields to the gentlelady from California, Ms. Eshoo, for an opening statement.

Ms. ESHOO. Thank you, Mr. Chairman. Good morning to you, and welcome to all of the distinguished panelists that are here to enlighten us today.

As my colleagues know, our committee, the House Commerce Committee, and the House Judiciary Committee spent many, many, many hours in the last Congress on the Digital Millennium Copyright Act. I think the legislation represented an important compromise on the issue of fair use of copyrighted works.

We are here today to hear from our distinguished panelists and get a 1-year report from some of the principal industries involved in the implementation of the legislation. Let me just offer some thoughts about this.

Central to the discussion during last year's legislation was the debate over technology and how one industry or others were going to build or respond to new hardware. During that debate, members were frequently assured by the various industries, some of which are here today, that if Congress passed the WIPO legislation, the private sector would assume the responsibility of working out many of the details and challenges that digital technology would continue to present.

That's why I'm somewhat concerned by some of the preliminary reports which indicate that some difficulties exists as a result of the compromise on standards that Congress proactively left in the hands of the various industries.

As I said repeatedly last year and will say again today, forcing Congress to intervene on setting standards, I think, is going to lead to a solution that, quite frankly, I don't think any of the sides will regard as a win. I think the last thing that the industries need are 535 Members of the Congress of the United States and the administration deciding what the technical standards should be for transmission of digital video and radio, kind of like the FASB board. Right?

A second issue I want to raise is the need for agreements to meet the expectations of today's consumers. consumers expect to be able to record and access shows when they want to view them. They also expect selectively to record music off various tapes or CDs and make their own tape or CD.

Whatever standards your industries attempt to develop regarding the emerging digital technologies, I strongly recommend that consumers are not prevented from or charged a fee for the capabilities to record or play video and music that they currently enjoyed. To attempt to do so, I think, would be bad marketing. To permit it to happen, I think, would be bad public policy.

Finally, I want to address the issue of protecting an artist's product in the face of developing technologies. There is not a technology in existence today, nor do I think there should ever really be one, that gives us the ability to take someone else's work product without his or her permission.

I don't think the information age should become the dark ages of copyright protection, but it doesn't follow that protecting an artist's work product means producing a particular way of selling, marketing or delivering that work product.

The Internet is changing everything, and it is enabling many people, including artists, to reach consumers directly. In the revolu-

tion of this electronic commerce age we are seeing entire economic sectors change, stock markets, retail markets and others redefining themselves.

Importantly, many new companies are springing up to find innovative ways to connect artists and the consumers. Standards should maintain an open architecture that encourages and does not stifle this entrepreneurialism.

This is one of the most important issues facing our country and the growth of the Internet. So, Mr. Chairman, thank you for having this very important hearing today. I look forward to hearing from the witnesses, and if I have any time left, I yield back. Thank you.

Mr. TAUZIN. The Chair thanks the gentlelady.

The Chair now yields to the gentleman from Florida, Mr. Stearns, for an opening statement.

Mr. STEARNS. Thank you, Mr. Chairman, and of course, I thank you again for holding the hearing on the first anniversary of the enactment of the Digital Millennium Copyright Act.

I would also like to thank our witnesses this morning for appearing before this subcommittee, of course, to provide us a perspective on the implementation of this Act 1 year later. I know how valuable your time is, too.

The endless hours of meetings and discussions among both members and staff ultimately led to this legislation, which many of us think is fair and balanced.

Though not a perfect solution, the Digital Millennium Copyright Act ensured the necessary balance and compromise between the needs of the content community who requires a modern, global copyright infrastructure, with the legitimate concerns of the manufacturing community, who rely on innovation and new products to lead the ever changing and even evolving consumer driven marketplace.

Our work, of course, I don't think, is complete. The players involved, both Hollywood and industry manufacturers, have not yet reached a consensus on licensing and fair use terms. As a result, consumers have yet to realize the benefit from digital television technology and products.

I believe both sides of the table raise valuable points which affect them equally, and I have no doubt, consumers are suffering and being left out in the cold until these issues are resolved.

So I look forward to our testimony, Mr. Chairman, and I applaud you for this hearing.

Mr. TAUZIN. I thank the gentleman.

The gentleman from California, Mr. Cox, for an opening statement.

Mr. COX. Thank you. I think we have a great panel here, and I'm more interested in what you have to say than what I have to say about it.

I have actually read all of the testimony that the staff were able to provide us, and hope to be able to be here for the whole hearing; but if there is any chance that I have stepped out, I'm going to try and follow up and make sure that I get not only the formal presentation but also the results of the give and take.

I would just add to what's been said thus far—and I think it's very appropriate, Mr. Chairman, to have a hearing on the DMCA

a year later—that while in some ways the Internet has changed everything, in other ways it hasn't changed anything.

The Internet is the latest development in the continuation of what Faraday shared with the King, and you remember that story about Faraday showing his dynamo to the King, and the King said what good is it? Faraday said, well, I'm not sure, but I know this; 1 day you'll tax it. We're all producing a lot of revenue that's subject to taxation, creating a lot of jobs as a result of the continuation of the harnessing of the electron.

In some senses, the legal principles that we are trying to apply here are very familiar, and I don't think we need to be spooked by the fact that the technology has changed. We need to sometimes just sit back, take a deep breath, maybe have a tall glass of cold water before we legislate, because we don't need to destroy long-standing principles of equity in order to make sure that we continue to take full advantage of the electronic revolution, the expansion of the Internet, whatever it might become.

We don't know what it is going to become, and certainly right up there preeminently important with all the other things, making sure that the creative community continues to provide products and services for America and the world.

Mr. TAUZIN. Would the gentleman yield a second?

Mr. COX. Sure.

Mr. TAUZIN. Because he has introduced another topic that I hope everyone will focus on; that is, taxation of this industry. There is a new report out by Progress in Freedom Foundation called "Taxation of Talking," and I commend it to your reading, because it indicates that, while we have passed a moratorium on taxation on the Internet, nevertheless, taxes on telephones, which are one of the pipes by which the Internet is delivered, have risen 62 percent in the last 12 years and becoming a crippling element in the contest for access to the Internet and for Internet services.

It's a compelling piece, and I commend it to your reading.

The Chair would now recognize himself for a point of personal privilege and ask you all to perhaps join me, if you will, in a moment of silence for an occasion that's occurring today, in recognition and prayerful thought of what a good friend of ours and a colleague on our committee is going through.

Bobby Rush lost his son this week in a shooting in Chicago, and as we continue our work in the Congress, our hearts are with him. I wish more of us could be with him personally, but he is burying his son today. If you would, please join me in a moment of silence on the grief and the pain that I know his family is going through.

Thank you.

[Additional statement submitted for the record follows:]

PREPARED STATEMENT OF HON. TOM BLILEY, CHAIRMAN, COMMITTEE ON COMMERCE

Thank you, Mr. Chairman. I commend you for holding this important hearing.

In recent years, this Committee has devoted substantial resources to encouraging the rapid deployment of new technology and expanding electronic commerce for the benefit of all consumers. One year ago, on this very day, President Clinton signed the Digital Millennium Copyright Act into law.

We meet today to assess the impact of that law on an important aspect of electronic commerce: the delivery of entertainment products via the Internet.

As my colleagues will recall, our Committee played a fundamental role in drafting the final version of this landmark legislation. Among other things, we fashioned a

bipartisan, multi-industry compromise on the so-called “anti-circumvention” provisions of the Act.

A prohibition against anti-circumvention was critical to ensuring that content creators would have adequate incentive to release their works in a digital environment. At the same time, we felt it was important to limit the scope of the provision to illegal “black boxes,” and make sure the provision *did not* sweep in ordinary consumer electronics and computer products.

In adopting a more balanced version of the DMCA than proposed by the Clinton Administration, we hoped to spur the development of new technology and stimulate electronic commerce for the benefit of everyone in society.

The purpose of this hearing is to check in progress we’ve made to date. As one means of getting new digital products to market, I understand that Intel and major consumer electronics manufacturers have developed strong encryption technology to help movie studios protect against the theft of entertainment products.

In fact, I look forward to seeing that technology at work this morning. As we observe this encryption tool, we should bear in mind that *consumers have certain expectations* when it comes to the issue of home recording.

The digital environment does, indeed, pose unique threats to copyright holders. But consumers’ expectations of what they can and cannot record *will not change* as we transition to digital.

This Subcommittee therefore needs to understand *today*—rather than *tomorrow*, when it may be too late—whether this technology will be used to upset those consumer expectations. And if it will, we need to know why—*today*!

I want to also remind my colleagues that this Committee has made a concerted effort in recent years to speed the introduction of digital television to consumers. How and when this encryption technology is implemented will have a substantial impact on the deployment of digital television services and products.

I’m told, for example, that the lack of HDTV programming on the market today is attributable, in part, to the fact that industry is still squabbling over how this encryption technology will be implemented. I urge the parties to resolve the details of this matter as soon as possible, so that the transition to digital can proceed apace.

Finally, I am anxious to learn more this morning about the industry’s progress in establishing standards that would govern the recording functions of new audio products. Sales of music over the Internet will be one driving force of electronic commerce, and I am hopeful that consumers will have a seamless electronic option available to them in the near future.

In closing, I want to welcome our witnesses. We look forward to your suggestions about how our Committee may be able to help you resolve any impediments to bringing new products to market.

Thank you again, Mr. Chairman. I yield back the balance of my time.

Mr. TAUZIN. The Chair is now pleased to welcome this distinguished panel, and I recognize everybody except the fellow on the left, but I guess we’ll start with him, the President and CEO of the Motion Picture Association of America, Jack Valenti. You’re on.

STATEMENTS OF JACK VALENTI, PRESIDENT AND CEO, MOTION PICTURE ASSOCIATION OF AMERICA; HILARY ROSEN, PRESIDENT AND CEO, RECORDING INDUSTRY ASSOCIATION OF AMERICA; RHETT DAWSON, PRESIDENT, INFORMATION TECHNOLOGY INDUSTRY COUNCIL; PETER HARTER, VICE PRESIDENT, GLOBAL PUBLIC POLICY AND STANDARDS, EMUSIC.COM INCORPORATED; GARY KLEIN, VICE CHAIRMAN, HOME RECORDING RIGHTS COALITION; MICHAEL MORADZADEH, DIRECTOR OF EXTERNAL LEGAL AFFAIRS, INTEL CORPORATION; AND RONDAL J. MOORE, VICE PRESIDENT, BUSINESS AND LEGAL AFFAIRS, RIOPORT.COM, INCORPORATED

Mr. VALENTI. Mr. Chairman, I want to have a little show and tell, and I hope that you will find this illuminating as well as a bit frightening.

I think that the Internet has great potential. It creates tremendous opportunities for a lot of people, but it also has the potential

to devastate America's most prized trade asset, the American motion picture and television program which dominates the world.

What I want to tell you today, I think, focuses on the threat of Internet piracy and the way we are trying to combat that threat.

Now let me begin by—am I on the screen here? All right. Hard goods piracy and illegal sales of video cassettes—whoops, I thought, my goodness, my eyes have gone totally out on me here—illegal sales of video cassettes, DVDs and VCDs.

Now hard goods are physical, like ordering a video cassette from some site, and it's sent to you by mail. The Internet, for the first time, though, allows pirated products to a broader potential audience than it has ever had before.

Pirates who peddle hard goods advertise on Websites through spam E-mails, Internet auctionsites. Now here are some examples. This is a site that sells video compact disks or VCDs. The newest films, including "Eyes Wide Shut" and "Mickey Blue Eyes" or others are available for sale.

Now these are films that have not yet gone into home video distribution. What is even more remarkable is you can purchase these films in this site that has just begun their theatrical run, and in some cases have not been in theaters. "Random Hearts" filmed in Washington, DC, was released only 3 weeks ago, is available on this site. "Toy Story II," not yet in theaters, is also on this site.

Now this is an eBay auction from yesterday—should be. Are we there? I'm sorry, Mr. Chairman.

Mr. TAUZIN. I have a pirated copy of that presentation.

Mr. VALENTI. I saw this happen to Bill Gates in Sun Valley once, and it was devastating to him, as it is to me. Well, we don't have this.

Mr. TAUZIN. Jack, in the high tech conference I had in Baton Rouge 2 weeks ago, Charlie Ergen with EchoStar lost his presentation on stage. He hit the wrong button, and it all disappeared, and he couldn't bring it back up. He stopped and looked at the audience and called out, "Chase," and his 12-year-old son Chase ran onto the stage and got it up for him.

Mr. VALENTI. I need that kind of help. This would have been an eBay auction from yesterday. You can bid on eBay a VCD copy of "Star Wars: The Phantom Menace," which, by the way, is not available legally in any format anywhere in the world.

Now we are working with eBay and other auctionsites to reduce this kind of piracy. We are trying to develop methods to prevent these types of auctions before they become posted.

The other form of Internet video piracy is downloadable media. This form of piracy really poses a much greater threat to the creative community. This is the same type of piracy that allows downloading illegal software or illegal MP3 audio files.

Now there are many different formats that have been developed to allow the viewing of this audio-visual product on the Internet, including Microsoft's Window media player and Rio player G2 from Rio Networks.

What's the threat? The threat is band width and digital copies. Therein lies where our future is put to hazard. Currently, our films are protected by two factors, the amount of time to download and the lack of unprotected digital copies of our works.

With the increased availability of broadband, you gentleman and ladies know that you can bring down a full length motion picture in 4 to 5 minutes, maybe no later than 15 minutes, whereas today it takes 4 to 5 hours.

Once broadband is here, the peril begins. Likewise, with the advent of digital recording devices and high definition television, some of our member companies' works are at risk of being digitally reproduced without their permission in commercially valuable forms.

Our ramparts are being breached on all sides, and if my metaphor is not too labored or bulky, I would say the enemy has opened the gate.

Downloadable media piracy has two characteristics: One, a single pirate—now listen to me; this is important. A single pirate with a single copy of a film can download thousands of copies to be downloaded in a matter of hours. In analog, quality is degraded with each copy, but in digital the thousandth copy is as pure and pristine as the original.

These copies can be mirrored, as the term of art, at sites all over the world, making even more copies possible. Thus, with a single keystroke a pirate can do millions of dollars worth of damage to the potential market for a motion picture, even though the pirate may not make a nickel.

By the way, the equipment required to be an Internet pirate is inexpensive, and it is portable.

One of the most recent innovations in obtaining illegal downloadable files is through the use of video and audio search engines.

Mr. TAUZIN. "Mini Me" is back up. "Mini Me" is up there. Look.

Mr. VALENTI. Here we go. This is a composite page from Scour.net. Scour.net allows an individual to search the Web for only video or audio files, and then link him directly to the site.

On the screen you can see a still of the Austin Powers new movie, "Austin Powers II." "Keno Reeves" and "The Matrix" both became available on home video only within the last month. Now we are working with the owners of Scour.net and other similar search engines to try to stop this kind of piracy.

Now this is an FTP site, File Transfer Protocol. You have to have a glossary of terms to deal in this business. Now these sites were created to allow the transfer of text files over the Internet. However, just about any digital file can be transferred by using these FTP sites.

Now get this. This site includes unaired copies of "Buffy, the Vampire Slayer," a television program. These are episodes not yet on the air. It's also worth noting that the site was hosted by the Carnegie Mellon University servers.

Now this is a screen capture of a direct download site from April of this year. This Website allows individuals to just click on the numbers and directly download portions of the motion picture. When this site was active, the movie "Pleasantville" was not yet released in any home video format.

If you look at that, I might tell you that most pirates can't spell. Now let me show you a brief clip from a film illegally downloaded earlier this week. The film is "Stigmata" from MGM. It is still in

some theaters in the U.S. and has not yet opened anywhere else in the world, but it is available on the Internet for free.

Now we go to stopping video piracy. That's "Stigmata" right there, MGM. All right. Today's piracy of audio visual products, though, costs the intellectual property community of movies and television more than \$2 billion a year and, like Kudzu, it is growing.

Now we are fighting it at MPA, fighting it with hundreds of investigators, technicians, lawyers. God, do we have lawyers, at a cost of millions of dollars in over 80 countries in the world.

Now technological measures are needed, no question about that, but education is also required, as are strong legal protections. I congratulate this committee and the Congress for passing the DMCA bill which was very, very helpful in protecting intellectual property.

Now how do you stop Internet piracy? Well, first the DMCA enactment helped us a lot. Three significant advancements: One, it gives us legal remedies against circumvention of technical protection. Second, DMCA extends protection to intellectual property rights owners who use copyright management information. Third, there is a simplified notice and take-down for Internet service providers.

Since the DMCA is very new, we have had limited experience in DMCA enforcement. We have filed some expedited subpoenas with the Internet service providers, the ISPs, to obtain information about individuals who have posted illegal stuff on the Internet.

DMCA will not work as Congress intended unless there is access to WHOIS. That's the name, the technical name, for sites and who owns them. We've got to maintain the WHOIS programs. MPA's piracy investigators must determine which Website is responsible for the illegal material, and the WHOIS data base is the very first step, Mr. Chairman, in determining the ultimate Internet pirate.

Now again, we are working with the consumer electronics and high tech industries to develop effective technological protection to prevent illegal copying of our digitized movies. These types of protection include encryption, copy protection on digital video disks, the 1394/Firewire protection, and digital watermarks.

Gentlemen, ladies, this is high priority, because I'm telling you this. If you can't protect what you own, you don't own anything; and as Congressman Gordon said, keep in mind that at a time when we are hemorrhaging in this country from trade deficits, and the last trade deficit number was unbelievably high, the motion picture industry is producing billions of dollars and serve as balance of trade to help the economy of this country and, if this Congress cannot protect the glistening trade prize that you have, no other country in the world is going to do that.

They are all trying to protect their interests, and they really don't care about protecting ours. So I'm putting it for you as forcefully as I know how. This great trade prize must be protected.

Thank you, sir.

[The prepared statement of Jack Valenti follows:]

PREPARED STATEMENT OF JACK VALENTI, PRESIDENT & CHIEF EXECUTIVE OFFICER,
MOTION PICTURE ASSOCIATION OF AMERICA

I appreciate this opportunity to present the Motion Picture Association of America's views on assessing consumer access to digital entertainment and the threat of Internet piracy. This is an opportune time to assess the vast possibilities, and the dangers, of digital delivery of motion pictures and other audio-visual works and the one-year anniversary of the enactment of the Digital Millennium Copyright Act (the DMCA).

I. THE OPPORTUNITY AND THE THREAT

Motion pictures are about entertainment, romance, adventure, excitement, drama, comedy, and mystery—intangibles that no one can put a value on except the people who watch films and the people who create them. Motion pictures are also intellectual property. The Internet and other electronic commerce media create tremendous opportunities for MPAA member companies' to market their intellectual property. The Internet also provides vast new viewing opportunities for consumers.

Motion pictures are affordably priced so that everyone can see a picture. Affordable pricing is possible because of the multiple markets in which the producers can amortize the cost of production, including theaters, DVDs, home video, pay TV, free TV, etc.—and now, the Internet. If these markets are destroyed because films are placed illegally on the Internet or transmitted electronically without adequate protection, the result will be an increase in price, a degradation in production values and a reduction in viewing options for consumers.

When piracy flourishes, commerce shrivels. Over the years, MPAA and its members have, to our chagrin, become intimately familiar with trends and developments in the field of copyright piracy. Today, piracy of audio-visual products—movies, videos, television programs—is a \$2 billion a year worldwide problem, and growing. We at MPAA are fighting it with hundreds of investigators, technicians and lawyers, at a cost of millions of dollars, in almost 80 countries around the world. In addition, our companies individually invest millions of dollars to counter this threat.

Copyright piracy *on the Internet* threatens to cause enormous damage to our industry, and to other intellectual property industries. If we are not successful in combating the Internet piracy threat, we could soon be faced with losses that dwarf the dollar amounts we lose today. For 1995, estimated annual losses due to foreign piracy of U.S. copyrighted works in 97 foreign countries was \$14.6 billion. Estimated annual losses worldwide are approximately \$18-\$20 billion.

Without the proper legal and enforcement infrastructure, Internet piracy will engulf the world's creative community. We must attack this problem on a number of fronts. Technological measures to combat piracy are essential. Unfortunately they cannot solve the entire problem. Strong legal protection must be adopted and, more importantly, vigorously enforced worldwide if sufficient intellectual property incentives for creative effort are to be preserved. Last year, Congress took a major step in protecting intellectual property on the Internet when it passed the DMCA.

The remainder of my testimony today is divided into three parts: first, defining what we mean by Internet audiovisual piracy; second, describing our MPAA's enforcement activities on the Internet since the enactment of the DMCA and third, explaining how the MPAA has been working with the high-tech community and the consumer electronics industry to implement workable technological solutions for preventing illegal piracy.

II. DEFINING INTERNET AUDIO-VISUAL PIRACY

Internet piracy of audio-visual works comes in two varieties: "hard goods" and downloadable media. "Hard goods" are physical media such as videocassettes, DVDs, and video compact discs (VCDs). The Internet provides a worldwide marketing tool for such media by bringing pirate products to a broader potential audience than ever before and making piracy harder to detect. Pirates who peddle hard goods advertise on websites, through spam e-mails, and Internet auction sites. MPAA uses traditional enforcement methods to staunch this flow of piracy.

The other form of Internet piracy is downloadable media. This form of piracy poses a much greater threat to the creative community. An Internet pirate can load a single copy of a motion picture onto a computer, acting as a "server," and make it available for others to copy onto their own computers at remote locations. This is the same as illegal software downloads or illegal MP3 audio files. Currently, the motion picture industry is protected by two factors—the amount of bytes needed for a full-length motion picture and the lack of unprotected digital copies of our works. A full-length motion picture includes more zeroes and ones than almost any other

type of digital product—more than a song or most software. In addition, there are not billions of copies of audiovisual works in digital forms that are not protected by technological measures, such as the DVD CSS scheme.

With the increased availability of broadband Internet access allowing for faster downloads and the companion development of the higher and better levels of compression, the motion picture industry is rapidly approaching the Internet piracy problem already faced by the software, video game and music industries. Likewise, with the advent of digital recording devices and high-definition televisions, some of our member companies' works are at risk of being digitally reproduced without their permission in commercially valuable forms. Our ramparts are being breached on all sides.

Downloadable media piracy has the following unique characteristics that threaten the foundations of the motion picture industry:

1. A single pirate with a single copy of a film can allow thousands of copies to be downloaded in a matter of hours. These copies can be "mirrored" at sites all over the world, making even more copies possible. Thus, with a single keystroke, a pirate can do millions of dollars worth of damage to the potential market for a motion picture, whether or not the pirate makes a nickel from this effort.
2. The equipment required to be an Internet pirate is widely available and costs far less than for other forms of piracy. It is also highly portable, making piracy more difficult to detect. Pirates do not need to remain in a fixed location but can upload illegal materials anywhere in the world on any computer that is linked to a network.
3. Consumers may obtain pirate products in the privacy of their own homes, rather than in the public marketplace, making it easier for the product to get to the consumer and making detection of transactions even more difficult. Moreover, this decreases the social stigma of obtaining illegal materials on the street or in flea markets.

III. CONGRESS RESPONDS—PASSAGE OF THE DMCA AND MPAA ENFORCEMENT ACTIVITIES

In response to the threat of Internet piracy, Congress began to act more than three years ago. In 1997, Congress passed the No Electronic Theft (NET) Act. Passage of the NET Act was an important milestone, and just this past August the Justice Department began the first successful criminal prosecution under the NET Act.

However, Congress understood that the NET Act was only one step in combating Internet piracy. On October 28, 1999, the President signed the DMCA. Enactment of the DMCA provided three significant advancements in combating illegal piracy. First, the DMCA insures "adequate legal protection and effective legal remedies against the circumvention of effective technological measures" that are used by copyright holders in the exercise of their rights, as required by the WIPO Copyright Treaty and the WIPO Performances and Phonograms Treaty (the Treaties). Second, the DMCA provides protection to copyright management information embedded in copyrighted materials, both electronically and physically. Third, as part of the DMCA, Congress created a simplified notice and takedown procedure for online service providers (OSPs) that are hosting websites with infringing materials. Following these procedures provides OSPs a safe harbor from copyright liability.

Because the DMCA is still very new, MPAA has limited experiences in DMCA enforcement. Since DMCA enactment, MPAA has filed a number of expedited subpoenas with Internet Service Providers (ISPs), to obtain information about individuals that have posted illegal audiovisual works on their websites.

MPAA has also worked closely with other portions of the copyright community to insure continued access to the domain name WHOIS database. Access to this database is essential in combating Internet piracy. The DMCA will not work as Congress intended unless access to WHOIS is maintained. MPAA's piracy investigators must determine which website is responsible for the illegal material. The WHOIS database is the first step in determining the ultimate Internet pirate. I want to thank the members of this Subcommittee, and the members of the full Committee, for protecting free unfettered access to the WHOIS database.

IV. DEVELOPING TECHNOLOGICAL PROTECTIONS

Finally, MPAA and its member companies have been working with the high-tech and consumer electronics industries to develop workable standards for the distribution of high value content over DVD, HDTV as eventually the Internet. Technology is currently in place that permits content owners to prevent the unauthorized copying of DVD material. This has made possible a thriving new market for movies, and consumer electronics devices, and has given consumers a new, improved viewing op-

tion. Intense discussions are currently taking place on technology to provide secure digital outlets for the safe transmission of digital content within digital devices, and between devices. Much of this discussion involves licensing terms, the details of which I do not know and in any case would be inappropriate for me to air them in this forum.

I can tell you in general that content owners, and consumer electronics companies and computer companies, are working very hard to create a digital environment that offers the security necessary to attract high value content. For my part, I take no position on what content should or should not be prevented from copying, or from redistribution on the Internet. That is a decision that will be made by individual content owners, their distributors, and, most of all, by consumers. What we are trying to create is an environment where content owners have the technological option to prevent copying and redistribution of high value content, and consumers have the option of viewing high value content in the widest possible variety of times, places and formats.

V. CONCLUSION

In conclusion, the promise of the DMCA is just beginning to be fulfilled. MPAA stands committed to working with Congress and all law enforcement agencies to implement the DMCA in a fair and just manner. MPAA and its member companies are committed to making electronic commerce work, while still protecting their investments in creating entertainment valued worldwide. Inadequacies in the protection of intellectual property in the networked environment will stifle the full potential of electronic commerce. A plague of piracy—thrift of intellectual property—threatens to blight this new marketplace.

Thank you for providing me the this opportunity to share these thoughts with the Subcommittee today.

Mr. TAUZIN. The Chair thanks the gentlemen.

We have 10 minutes before we vote on the journal. We have a 5-minute window, Ms. Rosen, if you would like to give your testimony now. Let me introduce Ms. Hilary Rosen, President and CEO of Recording Industry Association of America.

Ms. Rosen.

STATEMENT OF HILARY ROSEN

Ms. ROSEN. Thank you, Mr. Chairman.

I'm pleased to be here today because, in my view, the DMCA has set the framework for a very new and exciting time in the music business, and it's a time when we are beginning to see completely new business models bringing about unprecedented amounts of choices for music consumers.

Unlike my friend from the Motion Picture Association, I am extraordinarily optimistic about the situation at hand, and perhaps our experience over the last 2 years can shed some light on why that's so.

Perhaps, I think, the most important result of the DMC in some respects was the paradigm shift in the mindset of the important players in the online music space. Today there is generally universal acceptance of the notion that we can have ways to deliver music to consumers that offer both rewards for copyright owners as well as an ease of use for consumers.

In many ways, I think that the DMCA ended years of antagonism between the music community and the technology and consumer electronics industries. The debate which did begin with sort of fights over home taping, I think, ended with last year's discussion on anti-circumvention, and we are seeing very effective ways it's working in the marketplace.

One significant achievement for us flowing from that new way of thinking has been the creation of something called the Secure Dig-

ital Music Initiative. SDMI has been a cooperative, voluntary initiative between more than 120 companies in the music and technology industries. The goal is to develop open technology specifications for digital distribution of music.

I agree with Ms. Eshoo that an open architecture absolutely is essential to ensure innovation. The goal of SDMI has been simple, and that is that we have to provide consumers with the widest possible access to repertoire and that we have to do it through many different technology platforms. We have to respect the consumer transaction, and we have to make sure that those architectures can do it.

Our copying rules, in essence, have been relatively with one simple goal in mind. We want to be able to have consumers use music the way they currently do, enjoy their own—making their own compilations from music that they have bought and done their things.

What SDMI has achieved is an effort to prevent the uploading of music files onto the Internet, onto bulletin boards for thousands of people to get access to, a practice that I think most people agree is not appropriate, but the consumer should have the ability to use their own music any way they choose.

Just a few years ago, obviously, the marriage between the tech industry and the creative community was pretty rocky. There was—you know, the tech industry was telling us, well, forget it, artists are just going to have to give away all their music online and, if you want to make money, go on the road or sell teeshirts or something.

That was a nice concept. Unfortunately, that decision wasn't being made for them. Really, each industry had a lot to learn about each other's perspectives, and I think that we have.

On the creative side, I think that we have gotten a lot smarter about how our business models are going to have to change, and on the technology side I think that they have gotten more interested in supporting creativity rather than overruling it, that the technology companies themselves, as I think you'll hear, want the consumer experience of accessing music to be a good experience, and accessing pirate files is not a good comfortable music experience.

So we definitely have developed our mutual interest. So while SDMI is only part-way home, I think in many ways its principle objectives have been in long way achieved.

I want to talk a little bit about moving from a legal framework to actually what's happening in the music business now online. A couple of things: One, the Webcasting provision—some of you remember the internal contentious debate early on about the Webcasting provisions.

In many ways, what this committee did on Webcasting was somewhat prescient. Webcasting has turned out to be a very significant business online in just the last year. Yahoo just bought, you know, broadcast.com for \$5 billion. AOL has spent \$330 million to buy spinner. NetRadio's recent IPO raising over \$100 million for Webcasting has proved that the Webcasting business is a new opportunity for everybody, and that the licensing provisions that have been created are very important.

Lots of other things are happening online. I know you have a vote, and I'm running out of time, but I'm going to—our companies are all online with very significant consumer identified projects.

Universal and BMG have partnered on GetMusic, a retail and promotional site which is soon to be a downloading site. Epic Records has been offering, you know, just this week a new Rage Against the Machine soundtrack on launch.com.

There are so many examples. I have attached a bunch of them in my testimony for what we are doing proactively online, because in my view, being proactive online with a legitimate business is critical also to combatting piracy.

I don't want to minimize piracy. The RIAA has the largest online enforcement operation for any intellectual property business in the world. We have all of the things that Jack has shown within the music space and, in some respects, maybe more.

Obviously, everybody has heard about the MP3 issue over the last year, but the DMCA actually has given us very important tools here. There's very good relationships now with ISPs, and we have been cooperatively getting sites taken down, and we are working now on new technical tools to bring things down.

Mr. SHIMKUS [presiding]. Thank you for offering. I have already been. So we would like for you to wrap up.

Ms. ROSEN. Education is obviously an important component here, and I just want to say one thing about the international issue. U.S. leadership in passing WIPO implementation and treaty ratification has been very, very important.

I have been traveling around the world this past year extolling the virtues of the Internet and the opportunities for the music business. Passage of DMCA actually gave me the opportunity to do that.

I contrast my enthusiasm for the development of the online music business with some of my colleagues in the music industry overseas. Record companies have not tended to license music for download overseas.

There is still a significant concern about their rights in many countries to enforce against piracy, and that's why adopting WIPO treaties and implementing legislation around the world has been a critical priority for the RIAA this year.

I think, in conclusion, I'll just say that much has been made in the press over the last year about the availability of MP3 files and how the record industry was threatened with extinction. I think, indeed, the opposite is true.

MP3 has given us a great lesson, and I assure you we are smart enough to learn it. Consumers want music online. Our challenge now is to develop the business models that consumers want to use to get new music, to provide the best, most creative outlets possible for artists, and to keep doing it in new and exciting ways.

I'll stop there, Mr. Chairman.

[The prepared statement of Hillary Rosen follows:]

PREPARED STATEMENT OF HILARY ROSEN, PRESIDENT & CEO, RECORDING INDUSTRY ASSOCIATION OF AMERICA

Mr. Chairman, members of the Subcommittee, thank you for the opportunity to be here today on the one-year anniversary of the enactment of the Digital Millennium Copyright Act. This historic legislation set the framework for the tremendous

growth in the digital marketplace we have seen in the last year and that will continue to bring consumers the promise of a thriving Internet for years to come.

I. PARADIGM SHIFT

Perhaps the most important result of the DMCA for the recording industry was a paradigm shift in the mindset of the important players in the on-line music space. Today, there is almost universal acceptance of the idea that we need to have ways to deliver digital music to consumers that offer security for the creative community and ease of use for consumers. Enactment of the DMCA ended years of antagonism between the entertainment and copyright industries and the technology and consumer electronic industries. This debate, which began with fights over home taping and ended with last year's discussions on anti-circumvention, had raged unabated for decades. Now, new technology deals are announced every day between our companies and different members of the technology industry.

One significant achievement flowing from this new way of thinking was the creation of the Secure Digital Music Initiative. SDMI is a cooperative, volunteer initiative between more than 110 companies in the music, consumer electronics and technology industries, to develop open technology specifications for protected digital distribution of music. The goal of SDMI is to provide consumers with access to the widest repertoire of digital music available through many different delivery platforms.

Just a few years ago, the marriage of the technology industry and the creative community was very rocky. The gurus of the technology revolution all said that artists and record companies should wake up and accept that all of our recordings must be given away for free on the Internet. Artists could make money by going on tour or selling merchandise or advertising.

However, record companies and artists have been reluctant to merchandise themselves in this way just because some technological predictor says this is how to survive in the future. They want to be able to maintain their artistic integrity without turning themselves into a merchandising vehicle. Also, this did nothing for older artists who depend on their catalog sales but can no longer make any money touring. Artists wanted their creative works protected online, as in the physical world. And, if artists wanted to give away their music, they wanted to make that choice for themselves.

Each industry had a lot to learn about the other's business. On the creative side, the record industry got smarter about how business models would have to change, but the technology companies got more interested in supporting creativity instead of overruling it. While SDMI is only part way home, its principal objective has been established. When people are brought together to work out their mutual interests—new explosions of opportunities will happen for artists, consumers and industry. And, this has certainly happened in the last year.

The principles of the DMCA supported the creation of the SDMI initiative. For example, if a content owner can create an effective protection mechanism, e.g., encrypting their work, the DMCA makes it unlawful to manufacture, distribute or import devices whose primary purpose is to circumvent these protections. In other words, content has value and it's worth protecting. And, the technology and consumer electronics industries—and ultimately consumers—all benefit by working with us to deliver secure content in the digital marketplace. This mutuality of interests has flowed from the DMCA framework.

II. THE MUSIC INDUSTRY IS ONLINE

Moving from the legal framework to the business models, what's happening with online music delivery and how did the DMCA get us here? The music industry has not just accepted new technology, we are putting our creative talents to use, working with technology partners and trying out new ways of delivering this important consumer experience. Every one of the major recording companies has announced plans to begin offering consumers the music they want in new ways.

It's true that the Internet changes everything, and the business world is hustling to react to and exploit those changes to its advantage. The music industry is not unique in meeting this challenge. The Internet has changed the way stockbrokers interact with their customers, with publishing, with e-commerce that covers everything from toys to wine and with business services that have put databases and storage facilities into cyberspace and out of the file boxes.

Of course, one thing that distinguishes music from most other products is that you can not only market and sell it online—you can actually deliver it, instantly, through the very same channel. This is a trait shared with the software industry

and so of course it's no surprise that we share some of the same challenges with respect to online piracy, which I'll address in a moment.

Some have argued that the major record companies have been slow to adapt their businesses to the web. In part this is true but it has also been entirely appropriate. The reality is that when large companies hold billions of dollars of assets on behalf of artists, they are careful with how those assets are used. It is one thing to be in your mom's bedroom developing the new world order on your computer when you have nothing at risk, but record companies and artists still sell 98% of their product through traditional bricks and mortar retail. It always seemed to me that thoughtful action was the appropriate order of the day. *No artist*, no matter how visionary, wants their record company to negatively affect their Wal-Mart sales.

This recognition of creative rights gives us the ability to unleash our creative talent and expertise. Thus, in the last year, we have seen dramatic changes at large and small companies. Taking risks is now the name of the game. The competition for winning ideas and exciting sites has been intense. And the music fan has been energized all over again.

The Webcasting Provisions

An important provision of the Digital Millennium Copyright Act specifically set forth a framework for efficient licensing of music performed on Websites. Before the DMCA, these "webcasters" faced the challenge of obtaining licenses from individual record companies, and record companies correspondingly faced the problem of licensing so many new businesses. The DMCA granted webcasters, and all digital music services meeting certain criteria, the access to music they needed to operate efficiently.

Webcasting has grown very quickly and because of this the Committee work can be considered prescient. One need only look at Yahoo's \$5 billion purchase of broadcast.com, AOL's \$330 million purchase of Spinner.com, and NetRadio's recent IPO resulting in a market cap of more than \$100 million to see that webcasting is big business. The DMCA statutory license ensures that recording artists and companies will reap their fair share from webcasting businesses built on their music content while at the same time assuring entrepreneurs the access to an easy efficient licensing system.

Since early this year, the RIAA has been negotiating statutory license rates with webcasters on behalf of more than 2000 record labels. These negotiations are complex and challenging due to the many business models employed by webcasters. But the marketplace is working: RIAA has completed many deals with webcasters and is negotiating with many others.

What else is happening online?

Universal and BMG, have partnered on GetMusic.com, which is now a retail and promotion site but will soon be a downloading site as well.

Warner and Sony have bought CDNow to create new branding for a comprehensive music site. Both companies are going to start selling tracks for download before the end of the year.

Sony Music is offering online access to two full-length promotional tracks from the forthcoming Fiona Apple album in advance of the November 9 release of Apple's album.

Epic Records worked with RealNetworks to make available the new *Rage Against The Machine* album—and one unreleased live track only accessible through the Web. Fans who downloaded the album can also get a live bonus cut not available on the album by connecting the CD to a private website.

Atomic Pop put Public Enemy's new album on the web first for downloading before it went to traditional retail, even though they expect to sell more copies at retail.

Virtually every label, large and small, is using the web to build a direct relationship with an artist's audience. Atlantic is doing its own webcasting. Astralwerks has more fan interaction with the Chemical Brothers than I've ever seen—to the point where fans suggest marketing strategies to the band and they are encouraged to do so!

EMI has partnered with Liquid Audio for the sale of tracks and with Musicmaker for compilation downloads. Musicmaker has many small catalogs that it has joined together to create one of the largest libraries for custom compilations in the world.

Of course, digital music is not just about the Internet. EMI and Digital On-Demand are offering digital distribution of a significant proportion of the EMI catalogue into retail stores. The customer also receives the original packaging associated with the album, including the original cover art and liner notes.

Virgin Records America and David Bowie offered his new album '*hours...*' via the Internet, prior to its arrival in brick and mortar stores, and an additional new track was offered exclusively through the download.

Grand Royal Records, Capitol Records and the Beastie Boys joined LAUNCH Media, and Microsoft in offering three previously unreleased Beastie Boys tracks, and the companies pledged donations to Kosovo relief for each new visitor who downloaded the free tracks.

It is also worth mentioning that even this model of delivering music on-line as downloads is up for grabs. If you listen to some industry experts, they will tell you that music should never be sold as downloads, that we should be streaming the music instead of giving away the digits that make up a sound recording. This line of thinking is that in this way music becomes even more portable and begins to interact with consumers more like a service rather than a product.

And Todd Rundgren has impressed me with his vision that true music fans will get their music via direct subscriptions with their favorite artists. He doesn't have a record label, he has a base of devoted fans and they are getting "All the Todd they can eat" for \$50 bucks a year.

Many sites already make customized music recommendations to returning clients based on their buying history. Or they suggest artists within the same genre as an artist whose name is entered in a search. So a site will say, "If you like Sarah McLaughlan, you might also be interested in Mary Black." You've all seen this marketing technology at work and perhaps, like me, you've been inspired to check out bands you've never heard of as a result.

III. MUSIC PIRACY

The examples listed above demonstrate the promise of electronic commerce. However, we must not ignore the threat presented by music piracy, especially online. My enthusiasm for new forms of music delivery should not be confused with RIAA's continuing commitment to fighting music piracy.

Whether it is street vendors or on the Internet, if copyright owners tell us that it is unauthorized, we seek to take it down. On the Internet, this has presented some interesting challenges for the past few years. The DMCA has given us specific tools to get infringing material down immediately. Upon receipt of a compliant notice, Internet service providers (ISP's) are incentivized to take down the infringing material, thereby minimizing the harm to the artists and companies who own the music. We have developed very good relationships with most ISP's who cooperate fully. In this way, one of the most contentious areas of the DMCA—i.e. the online service provider liability area, has worked out just fine.

However, monitoring the thousand of web sites and sending notices to Internet service providers of infringing material is a daunting task. We also believe in education—letting music fans know that piracy hurts the artists they so admire. And frankly, we believe that the best way to control piracy in the long run is to have available legitimate product for consumers to access. Why steal when you can buy legitimate product with the same ease?

Mr. Chairman, I have traveled around the world in this last year extolling the virtues and opportunities of the Internet for the music business. Passage of the DMCA gave me the ability to do that. I contrast my enthusiasm for the development of the on-line music business with some of my colleagues overseas. For, while we are seeing the fruits of our efforts to keep the Net clear from piracy to enable the development of the American music market, many countries around the world are still viewing the Internet with concern. Those countries that have not adopted the WIPO treaties and implemented the legislative changes necessary to give copyright owners protection, are the same countries whose consumers are not getting the benefit of a developing music market. While some of these exciting new online music experiences in the United States are available overseas, it is more limited. Record companies aren't licensing downloads for delivery outside the United States nor are entrepreneurs building new businesses with the same speed. Until there is a seamless web of WIPO implementation worldwide, we should not rest. Securing that protection has become a top priority of the RIAA as we work with our colleagues around the world.

We are all going to experience many new opportunities online, but one premise should remain our mantra—that the artists and those who invest in their creativity should be able to determine their own fate.

In conclusion, much has been made in the press over the last year about the availability of MP3 music files and how the record industry is threatened with extinction. Indeed just the opposite is true. Our opportunities are greater than ever before. MP3 has given us a great lesson. Consumers want music online. We learned that

lesson without investing a penny. Our challenge now is to develop the business models that consumers want to use to get new music, to provide the best, most creative outlet for artists to create new works, spend a significant amount of money to educate consumers about new music available online and use the new opportunities for direct marketing and technological innovation to deliver music.

What happens when music reaches the human ear arousing physical and emotional sensations is an organic connection.

Always has been. Always will be.

The recording industry is in the business of capturing the magic in that connection and delivering the experience to millions of listeners around the world.

It always has been, and always will be.

Thank you for inviting me here today and thank you your leadership and foresight on these important issues.

Mr. SHIMKUS. Thank you for your testimony.

We are going to move a little bit out of order because of the presentation, and I'd like to ask Mr. Rhett Dawson, who is President of Information Technology Industry Council, for his testimony, 5 minutes. Your full statement is inserted into the record. With that, welcome.

STATEMENT OF RHETT DAWSON

Mr. DAWSON. Thank you, Mr. Chairman.

The Information Technology Industry Council, ITI, represents hardware, software, networking, internet service companies, and we are, as you know, at the cutting edge of technology, responsible for 35 percent of the economic growth in this country.

According to a University of Texas and Cisco Systems study released yesterday, in 1999 the Internet economy is expected to pump about \$507 billion into the U.S. economy this year, and employ about 2.3 million Americans.

To put this into perspective, by comparison such well known industries as airlines at \$335 billion and telecommunications at \$300 billion are relatively smaller, and these are rewarding people with high paying jobs on average of \$53,000 versus an average of \$30,000 for the economy at large.

The key to this can be summed up in one word, and that's innovation. The industry's success is built on the expectation by our customers that we are going to delivery a constant stream of new products with new capabilities and new features able to do more new things. This recognition drives our position on copy protection.

We think that we are responding to consumer demand, and our willingness to work collaboratively with the industries that you see here at this table is a way to protect consumers and intellectual capital at the same time.

Passage of the Digital Millennium Copyright Act was an important milestone for our industry, and we think that updating copyright laws to account for a world where nearly all copyrighted content, which is what it did and nearly all digital devices will be connected, was a good step forward.

In our testimony before this committee last year, we spoke of the important role that truly effective technological measures will increasingly play in protecting copyrighted materials in a digital world. At the time of our testimony, we had already invested several million dollars in copyright protection technology and years of collaboration with the consumer electronics, recording and motion

picture industries, and that collaboration and that investment continues today.

Because modern copy protection locks up content, and it subjects it to its restrictions on recording, it must not be misused to restrict consumers from lawful and other kinds of recording, such as time shifting. For this reason, the IT industry has made encoding rules a condition for using our copy protection technology.

Requiring computers to degrade performance or quality for content is not an acceptable way to start this conversation. There is no current danger of consumers intercepting an analog signal between the computer box and the monitor, and the technological solutions really are on the way to protect this interface.

The IT industry will continue to work on effective copy protection technology that balances the rights of all copyright holders to protect their intellectual property in this new digital world, and we will do that without degrading the capabilities of our products or restricting the ability of consumers to use those products.

We believe that current disagreements that may emerge in the context of these discussions have not and will not significantly delay the rollout of high quality copyrighted material, and we are going to continue to work with these industries to try to reach those goals.

Thank you, Mr. Chairman.

[The prepared statement of Rhett Dawson follows:]

PREPARED STATEMENT OF RHETT B. DAWSON, PRESIDENT, INFORMATION
TECHNOLOGY INDUSTRY COUNCIL

Mr. Chairman and Members of the Subcommittee: My name is Rhett Dawson. I am president of the Information Technology Industry Council ("ITI"). On behalf of ITI's member companies, I would like to thank the Subcommittee for holding this important hearing today, one year after the passage of the Digital Millennium Copyright Act ("DMCA"). ITI is the association of leading information technology ("IT") companies. We advocate growing the economy through innovation and support free-market policies. ITI members had worldwide revenue of more than \$440 billion in 1998 and employ more than 1.2 million people in the United States.

ITI's members are on the cutting edge of the fast-evolving Internet economy that is fueling the expansion of the U.S. economy. Information technology is responsible for 35% of the growth of the U.S. economy in the past four years. According to a University of Texas study released just yesterday, the "Internet Economy" actually grew 68% from 1998 to 1999, pumping about \$507 billion into the U.S. economy and employing 2.3 million Americans. To put this in perspective, the Internet economy generates more annual revenue than such entrenched American industries as airlines (\$335 billion) and telecommunications (\$300 billion).

Of the 3,400 businesses surveyed to measure the size of the Internet Economy, more than one third did not exist before 1996. The new businesses alone now employ 305,000 people. And these are good jobs. Jobs in the IT industry pay an average of \$53,000, compared to \$30,000 in the economy at large.

The effectiveness of the information technology industry in fueling the U.S. economy can be summed up in one word: innovation. The IT industry's success is built on the expectation by our customers that we will deliver a constant stream of products, each with new capabilities, new features—able to do more things. This recognition has, to some extent, driven our positions on copy protection when some parties have sought to protect their material by asking the IT industry to dumb down its products or remove features that consumers demand.

THE DIGITAL MILLENNIUM COPYRIGHT ACT

Passage of the DMCA last year was an important milestone for the IT industry, updating copyright law to account for a world where nearly all copyrighted content will be available in digital form and nearly all digital devices will be "connected" in one form or another. To deal with the novel intellectual property issues presented by the WIPO Copyright Treaties and the DMCA, ITI developed a set of principles

to guide our advocacy and evaluation of the various legislative permutations of the implementing legislation. These principles are still relevant today:

1. Intellectual property should be strongly protected domestically and internationally.
2. Whenever possible, rely on strong enforcement of existing copyright laws.
3. Regulate behavior, not technology. Legislation should focus on the intent to infringe, not on the provision of technology that could be used to infringe.
4. Do not harm the IT innovation engine, which is a key building block for economic growth and provides the tools and infrastructure that makes the GII possible.
5. Promote, rather than stifle, innovation.
6. Maintain the proper balance, inherent in the Constitution, between the protection of intellectual property and the promotion of innovation.
7. View technology as an opportunity, not a threat. Technology not only provides mechanisms for distributing content and generating revenues, it enables creative and effective solutions to protect intellectual property.
8. Remember that IT companies are content providers as well as technology providers. There are many synergies to be gained from working with content providers to develop mutually beneficial solutions. In fact, there are so many synergies that some companies have both content divisions and IT divisions, a convergence that is likely to grow.

HISTORY OF COPY PROTECTION

In ITI's testimony before this Subcommittee last year on the Digital Millennium Copyright Act, we spoke of the important role that truly effective technological measures increasingly play in protecting copyrighted material in the digital environment and the role of innovation in creating such technology. At the time of our testimony, the IT industry had already invested millions of dollars in research and development and several years of discussion with the consumer electronics and motion picture industries to develop such technology.

ITI's involvement began in 1996, when the consumer electronics and motion picture industries proposed the Digital Video Recording Act ("DVRA"), which would have required all IT and consumer electronics device manufacturers to include special circuitry in their products that would detect and respond to simple digital copy control information ("CCI") bits in the digital content by restricting or preventing copies. Under this approach, every data stream would be checked by every digital device to detect and block unauthorized use of movies by the home user.

ITI opposed the DVRA because we found the specific technical solution to be burdensome, ineffective and inconsistent with how our products worked. Because the system relied on nothing more than an embedded "don't copy" or "copy once" message, it would have been trivial to defeat with the simplest software or device. The content itself would be unprotected and circumventing it would mean nothing more than ignoring the embedded copy control information. In some circumstances, it could even be done accidentally.

More importantly for our purposes, it would have required computers to look for copy control information in every digital file, whether it was a movie, spreadsheet, or personal correspondence. This would have slowed personal computer performance by as much as 50% with no apparent benefits to the users. The IT industry could neither accept such a burden, nor in good faith could we pass it on to our customers, many of whom were not even interested in watching Hollywood movies on their desktop systems.

IT INDUSTRY JOINS THE COPY PROTECTION EFFORT

Even as we objected strenuously to the technological specifications in the DVRA, the IT industry recognized the importance of protecting copyrighted digital content and joined with the motion picture and consumer electronics industries to form the Copy Protection Technical Working Group ("CPTWG") to develop a mutually acceptable technological approach to digital copyright protection.

By October of that year, the CPTWG had already agreed on a video scrambling method proposed by Toshiba and Matsushita called "CSS." With scrambling, computers would not need to check every data stream for copy control information. Instead, they would only need to pay attention to anti-copy rules when they affirmatively de-scrambled movies to make them watchable. Under the content scrambling system ("CSS"), manufacturers are licensed to de-scramble (and therefore to access and play) the video under terms that require the licensed device to obey embedded copy control information ("no copy," "copy once," "copy freely," etc.).

More recently, the three industries have made substantial progress with the "5C DTCP" system, which allows digital devices in a home network to share copy pro-

tected digital content with one another through a secure interface. Before transferring a secure file to another device in the network, a "5C" licensed device will use a digital signature "handshake" to verify that the receiving device is also secure and subject to the appropriate licensing terms. The content is then encrypted and sent over an IEEE 1394 connector.

Combined with CSS, the 5C technology creates a secure system where copy protected content will only be received, decrypted, played and shared with devices that are programmed to respond to the embedded copy control information. Any unlicensed device that de-scrambled copy protected content from this system would be outlawed as a "circumvention device" under section 1201(b) of the DMCA.

ENCODING RULES

Because copy protection technology effectively "locks up" content subject to the embedded copy control specifications and because it is likely to be so widely used, its terms of use are very important. From the viewpoint of technology companies, the encoding rules were developed to ensure that the technology we developed to protect Hollywood's rights would not be used in a way that hurts our customers and makes our products less useful and more expensive.

Designed to track existing law and customary consumer copying practices, the encoding rules specified when the various copy control information designations of "never copy," "copy once" and "copy freely" could be used. "Never copy," the most restrictive standard, was reserved for pay-per-view, video on demand and packed media (DVD or tapes). "Copy once" would be applied to premium channels like HBO and Showtime. To be consistent with existing consumer practices, free and basic programming, like over-the-air broadcasts and basic cable, would be designated "copy freely."

These encoding rules were incorporated in the DVRA language negotiated between the consumer electronics and motion picture industries and the IT industry's voluntary cooperation to develop effective copy protection was based on the same framework. In fact, the encoding rules are an even more important part of the CPTWG and 5C negotiations since the technology at issue encrypts copy protected content. That is why the current draft license agreement for the 5C technology would bind content owners to the encoding rules.

COMPUTER SCREEN RESOLUTION

Another MPAA proposal in 5C discussions is a requirement for computers with analog connections to their monitors to intentionally degrade high-resolution pictures to either produce a smaller picture or a full-screen image with lower picture quality—something the IT industry finds unacceptable. The studios have advanced this proposal to prevent users from capturing an unprotected high-resolution signal between the computer box and the screen.

At present, however, devices which would capture such a signal are not available to consumers. At least one IT company has made substantial progress in developing technology to protect this interface and our door remains open to accommodating such technology as soon as mutually agreeable terms can be worked out. In the interim, though, degrading screen resolution is not an acceptable method for protecting an interface that is not presently in danger.

Higher rates of resolution have been the norm for even low-end computers for many years, and there is substantial, well-founded resistance to the computer industry making this change. Consumers have a right to expect that more expensive DVD drives and digital TV tuner cards will produce high-quality signals that reflect the monitor's full capabilities and it is unfair that consumers who make the investments in such new technologies should be denied the best possible viewing experience.

CONCLUSION

The IT industry will continue to work on effective copy protection technology that balances the rights of movies studios, recording companies and all copyright holders to protect their intellectual property in the digital environment without degrading the capabilities of IT products or restricting the ability of our customers to use our products for lawful and customary purposes. We sincerely hope the current issues and disagreements that have emerged in the context of the 5C negotiations do not significantly delay the roll-out of digital television or the availability to our users of premium copyrighted material. We will continue to work with the motion picture and consumer electronics industries to reach these goals and hope that no congressional intervention is necessary in this context.

Mr. SHIMKUS. Thank you for your testimony.

We will next move to Mr. Peter Harter, Vice President of Global Public Policy and Standards. Welcome again. Your full statement is in the record. Oh, he's from EMusic.com, Inc. Excuse me. Welcome to the committee, and you can begin.

STATEMENT OF PETER HARTER

Mr. HARTER. Good morning. Thank you. It's an honor to be here.

First I'd like to start my remarks this morning with a little history about EMusic. EMusic.com is based in Silicon Valley, and it is a startup. We are about 1½ years old, 80 employees. I joined the company back in April of this year after having served 3½ years doing public policy at Netscape Communications. So I personally have been out in the Valley working on copyright Internet issues for quite a long time, if you measure it in Internet years.

So the issues of the DMCA—I do remember going out for my first interview at Netscape in the summer of 1995 carrying Bruce Layman's green paper report. It was too big a file to E-mail to Netscape. I had to physically carry it across the country.

So DMCA has been with me a long time, and I have spent time internationally over at WIPO at the treaty conference in December 1996, spent a month over there at the treaty conference. So I bring a long perspective on these issues, even though EMusic is only 1½ years old.

EMusic, even though we are a startup, we have people from Hollywood and New York, veterans of the recording industry from Walt Disney and Time-Warner. We have people from the software industry, from the portal industry, and from the music licensing area. So we have a very diverse culture in our company, despite its youth and size. So, hopefully, we can bring some measure of credibility, despite only being 1½ years old.

EMusic is traded on NASDAQ. Market cap varies between half a billion and three-quarter billion dollars. We reported last quarter's revenues of a whopping \$180,000. So we are part of the Internet economy, and we have high expectations for consumers being able to buy music very cheaply and very conveniently online. This will be a supplement to people buying music through mail order, through sites like Amazon and CDNow and, of course, through traditional brick and mortar retail stores in the physical world.

This is about not so much disintermediation of the existing record promotion distribution industry but reintermediation using the efficiencies of the Internet to give consumers more choice and to level the playing field between artists and fans, in a sense getting artists directly in contact with their fans. They can download directly to their fans, no matter where they are in the world.

EMus.com is a new business model. We are not a label per se. We are a digital distributor. We don't have any physical products. We download music files for a dollar a song or nine dollars an album, and we have music from all genres, classical and jazz, hip hop, rock and many other music formats.

At present, we use the very popular MP3 format, but let me be clear. We use this format because it is to date the most convenient and widely adopted format. In order to get this new business model out to market, you have to go to where consumers are, and the consumers are using MP3.

There are other formats out there such as Liquid Audio, Windows Media and RealNetworks, and there will be successor formats to MP3. MP4 will be coming out, and that has security, watermarking, new technologies built in, which are very interesting.

So for the record, EMusic—we like to think of ourselves as somewhat neutral, but we are very much in favor of MP3, because it is an open format, and it's most widely used, and as business people you shouldn't use a format that ten people use, because your competitor will certainly use a format that hundreds of millions of people use, and they will beat you in the marketplace.

With regard to security and piracy, these issues have come up. At EMusic, we are an Internet company, but we also sit in the other world as a copyright holder. We license from artists, independent labels and other rights holders long term contracts to sell their music.

We have to pay them royalties. So if we cannot pay royalties from sales, if pirates are undercutting us, that's a business problem. Oftentimes, we own the masters ourselves. So we are, in fact, the copyright owner directly.

So the comments of Mr. Valenti and Ms. Rosen are very important to take into account here, but I have to say, with our perspective of being a technology company in the sense of our Internet experience, security is a very tough issue.

This Congress has dealt with key escrow export controls and has dealt with the FBI asking for years for a very complex architecture called key escrow and public key encryption. Most consumers use the most easy to use format like American Online, a very popular service, because it is easy to use.

AOL succeeded in the marketplace because they make accessing online content very easy, and I think that, if you put a complex system of architecture in to protect content, it will either inhibit the market or people simply won't use that format.

So with security, we have to be very careful not to have a closed system that's very complicated. Although EMusic is a participant in SDMI, we do have concerns about the complexity of the architecture proposed there, but that is an ongoing process, and we wish to engage in the dialog down the road with this committee and others in the industry as SDMI comes closer to its completion in its first phase.

In closing, Mr. Chairman, I wish to also support the comments of my colleagues here on the panel about international issues. Content is an export industry, and EMusic is based in California, but we sell our music worldwide.

Oftentimes we have worldwide distribution contracts with the artists and labels we work with, and they contract with us exclusively for multi-years, 5 to 10 year contracts to sell music worldwide. But given the physical nature of other kinds of music distribution, there are entities overseas called collection societies that, under a national law in their countries, have an obligation to collect a mandatory rate, a statutory rate.

In this country you have the Harry Fox agency and, for example, in Germany you have a group called GEMA. If we download music internationally and we have a contract to collect the statutory rate

for Harry Fox, this is sort of what the Internet tax issue has been, too many people trying to collect the same—their own cut in the same transaction.

We'll be coming back to you to discuss this issue in the future. So DMCA has been very good for the industry, but there are many more upsetting issues to look at down the road. Thank you, Mr. Chairman.

[The prepared statement of Peter Harter follows:]

PREPARED STATEMENT OF PETER HARTER, VICE PRESIDENT GLOBAL PUBLIC POLICY
AND STANDARDS, EMUSIC.COM, INC.

I. INTRODUCTION.

Mr. Chairman, distinguished members of the Committee, good morning. My name is Peter F. Harter, and I would like to thank you for inviting me here today to testify before the Committee.

One year ago, Congress enacted the Digital Millennium Copyright Act. The DMCA represented a comprehensive effort to update our existing copyright laws for the digital age. The fact that Congress was able to enact this legislation so soon after the conclusion of the WIPO treaties that it implements is a major accomplishment, and a testament to this institution's ability to stay on top of a rapidly changing technological environment. It is, quite frankly, a model that our friends in Europe and Asia would do well to emulate. The European Union is, for example, still engaged in the time-consuming process of drafting a new copyright directive to implement its WIPO obligations. Once that process is finished, it will still be a number of years before the individual Member States of the European Union implement the directive—and therefore a number of years before there are laws on the books in these countries to combat digital piracy.

I might also note that Congress' quick action in this area puts the United States in good standing coming into the WTO Seattle Ministerial. As you know, the effective protection of intellectual property rights under the WTO system is always a critical agenda item for the United States, and we can only enhance our negotiating position by being up-to-date in fulfilling our own multilateral commitments.

With that said, I would like to describe the business of Emusic.com and to make a few comments about the potential impact of the DMCA on the digital music industry. In addition, I would like to inform the Committee of some international trade barriers to ecommerce in digital music that the DMCA did not contemplate.

II. EMUSIC.COM, INC.

I am here in my capacity as Vice President for Global Public Policy and Standards of EMusic.com Inc. As one of the largest Internet sellers of digitally formatted music, EMusic.com is at the forefront of the newly emerging market for downloadable digital media products. This new market and the technology on which it is based have the potential to alter fundamentally the way in which music is distributed and consumed. Greater efficiencies in distribution, expanded consumer choice, and ease of access will result in lower prices, better products, and a larger overall market. This will benefit everyone—consumers, artists and the entertainment industry.

EMusic was founded in January 1998 by Gene Hoffman and Bob Kohn, two executives from Pretty Good Privacy (PGP), with decades of combined experience in Internet start ups, software firms, security, and music licensing. Formerly known as GoodNoise Corp., EMusic has been publicly traded since May 1998 and can be found today on NASDAQ under the symbol "EMUS." We have 80 employees, mostly based in Silicon Valley, and have a market capitalization of over half a billion dollars. We sell music from our website for 99 cents a song and \$8.99 an album. We have music from all genres and are aggressively acquiring the exclusive rights to digitally distribute the music from independent labels, artists and back catalogs. Mr. Chairman, we even have music from Louisiana: EMusic acquired the Jewel-Paula catalog from Stan The Record Man Lewis. We also have a distribution deal with Deep South records. We have focused our digital distribution efforts on independent labels, artists and backcatalogs in order to level the promotion, marketing and distribution playing field for such participants in the music industry because before the Internet they were always at a disadvantage with regard to the five major record labels. With open standards like the MP3 file format, Internet distribution and promotion firms like EMusic can help labels and artists reach a world wide audience of con-

sumers much more effectively than they could on their own. To further explain MP3 I have included a primer as an appendix to my written testimony.

III. UNINTENDED CONSEQUENCES OF THE DMCA.

I realize that you have invited me to talk about the Digital Millennium Copyright Act. And I will. But at the center of my testimony today is a different and far more potent law—the law of unintended consequences. I would like to suggest to the Committee that, even before it is fully in effect, the DMCA has already begun to cause difficulties that could not have been foreseen when it was adopted.

When Congress enacted the DMCA one year ago, it had to legislate against a backdrop of rapid technological change. As with any such effort, Congress had to craft new law based, in large part, on a prediction of what the future would hold. One of the predictions that Congress appears to have accepted was quite plausible on its face: As more and more “content”—books, films, music—is distributed in digital format through the Internet, copyright holders will increasingly seek to protect that content from piracy through the use of so-called “copyright management” systems. When a digital copy of a copyrighted work can be flawlessly reproduced and made available to a potentially unlimited number of persons, the security that surrounds that content will be vital to ensuring that the copyright holder gets his due—or so the DMCA assumes. Based on this assumption, Congress introduced a novel concept into copyright law—for the first time, the law protects not only the copyrighted work, but the means that are used to control access to that work. In effect, the law protects both the book and the bookstore—or, more specifically, the lock on the bookstore’s door. In addition to penalizing unauthorized uses of copyrighted work, the law now penalizes efforts to bypass any technological devices—such as encryption—that are used to control access to that work.

And so begins the story of the law of unintended consequences. For while the anti-circumvention provisions of the DMCA appear, on their face, to be a perfectly reasonable and well-measured response to a new problem—how to protect copyrighted works in the age of the perfect digital copy—the anti-circumvention provisions of the DMCA may, in fact, have a profoundly adverse effect on the emergence of new markets and new distribution mechanisms for digital media. A law designed to foster the growth of digital media may, in fact, have just the opposite result.

In order to illustrate why this is so, allow me to provide a brief overview of the state of play in industry I know best—downloadable music. The word “revolution” is used freely—and perhaps to excess—in describing the impact that the Internet is having on business and society. The term is unquestionably deserved, however, when it comes to describing the impact that the Internet has had on the ways in which people are able to access music. For almost the entire history of recorded music, the variety of music that has been available to listeners has been dictated, in very large part, by a relatively small number of recording companies that decide which artists belong on the “big” labels. Those labels are, in turn, likely to be available in major retail outlets and played on major radio stations—factors that largely determine which artists become successful. The practical effect of this system is that, with the exception of aficionados who actively seek out independent artists, most people listen to what they’re told to listen to.

Now, with the advent of MP3 and other file formats that permit people to download music directly from the Internet, artists are able to make their music directly available to anyone anywhere in the world who has access to the Internet—a number that expands by orders of magnitude each year. A music industry that was once funnel-shaped—with a small number of companies deciding what came out the other end—now more closely resembles an ocean. Virtually any band can make its music available on the Internet and become “known” to the rapidly expanding and increasingly vibrant community of music lovers on the Internet. Emusic.com forms a part of the community by gathering together and categorizing a large number of artists in one place and making their work available at relatively little cost to the consumer.

It will come as no surprise to any of you that the old-line recording interests have reacted to this revolution with some alarm. The ubiquity of the Internet and the power that it gives to the individual artist to reach out to potential listeners threatens to undermine the chokehold that the recording labels have long held on the music industry. If the listener no longer has to rely on the recording labels for making the music available, what role will the labels continue to play in this industry? And, most importantly, how will they continue to make money?

Which brings me back to the DMCA. How does the recording industry plan to put the genie of downloadable music back in the bottle? Why, through copyright management systems. Imagine a system in which the devices that are used to play dig-

ital music—whether at home or in portable devices—only recognize music files that bear the right digital “watermarks.” If the music file does not have encoded within it the information that the device looks for to determine whether the file is “compliant” with the copyright management system, then it won’t play the music. By the same token, a music file that is encoded with the “right” digital watermarks will not play on a device that does not recognize those watermarks. Because most consumers will want to own devices that play the well-known artists who are under contract to the big labels, as well as the massive collections of music that are owned by those labels, they will buy playback devices that comply with the industry-sponsored copyright management standard. In that one step, the big music interests will effectively regain control of the music distribution system—and the central role that they play in it. The genie will be back in the bottle.

So what do the anti-circumvention provisions of the DMCA have to do with any of this? Well, those provisions make it unlawful to attempt to bypass any technological device that controls access to a copyrighted work—including the type of copyright management system that I’ve just described. Copyright holders can sue individuals who bypass those technological devices, and can even seek criminal prosecution. Imagine, then, that the industry comes up with a copyright management system that it wants to foist upon consumers as a means of regaining its control over music distribution. Companies and individuals that are opposed to the adoption of that system—because of the adverse impact that they believe it will have on the market for downloadable music—want to test that copyright management system to see if it will, in fact, provide the level of security that its proponents claim it will. After all, the history of efforts to control access to, and copying of, any type of copyrighted work is littered with failures, usually for one of two reasons—either the security provided by the “system” was not good enough or it was too good. The protection system was either overtaken by new technologies that made it easy to evade or it was so single-minded in pursuing security that it prevented users from using the product easily. Usually, protection systems were one or the other—either ineffective or obtrusive. The DMCA, I’m sorry to say, creates incentives for the deployment of protection systems that are both.

How do security professionals prevent the deployment of weak security? There is only one way. It has to be attacked, publicly, relentlessly, by people with every imaginable motive—paid researchers working under contract, university professors and students publishing research. And a host of others motivated by everything from making a name for themselves to showing their defiance of authority. Painful as it may be, companies thinking about deploying a security system for copyright protection need to give every one of these individuals an opportunity to evaluate the system’s potential flaws.

The DMCA, however, does not encourage this kind of testing. Instead, it provides the perfect tools whereby the proponents of an industry-sponsored copyright management standard can squelch legitimate evaluation and criticism of that standard. By making it illegal to attack a security standard to find potential flaws, proponents of a security standard can use lawsuits and the threat of criminal prosecution to chill investigations of that technology—even investigations that are motivated not by any desire to make infringing uses of copyrighted content, but to prevent an industry and consumers from investing in a technology that is fundamentally flawed. Squelching such legitimate evaluation and criticism will only make it harder for consumers to have as broad a choice as possible in available music.

IV. ANTI-CIRCUMVENTION PROVISIONS HARM STRONG SECURITY.

The anti-circumvention provisions of the DMCA greatly increase the probability that poor choices will be made by decision-makers in implementing copyright protection systems. The criminal penalty provisions and research exception as currently drafted will likely have a “chilling effect” on legitimate efforts to rigorously test and criticize copyright protection systems by the general encryption community. This will in turn create an environment in which a system to be implemented within the industry may only be “tested” by the designers and a select few others. And once a choice is made, industry will have the further incentive to shield a flawed system from critique and exposure within the legitimate encryption community because of the “sunk cost” of implementing the system.

By providing such protection, the DMCA tries to thwart the “Darwinian” process that weeds out flawed and ineffective systems. Worse yet, by trading off effective technological protection for legal protection, it creates a false sense of security. The flaws will still come to light, but later—after far too much has been invested in a flawed system.

That's why I believe the DMCA encourages bad security systems. What's truly unfortunate is that it also encourages security systems that interfere with a consumer's enjoyment of the content. By providing criminal prohibitions for "circumvention" generally, the Act unnaturally tilts the entire industry toward a security-based paradigm for protecting copyright interests in this market. It encourages copyright holders to invest heavily in building "technology fortresses" to protect their rights. So far, the results have been expensive, cumbersome, and hostile to the formats that are most common on the Internet today.

Let me be clear. EMusic opposes music piracy. We are a distributor of copyrighted material, and we want to protect those rights. But building a technology fortress that locks in the clout of the major labels is by no means the only way to protect copyright interests, nor is it necessarily the best. It is simply too early to answer that question. Market forces operating naturally may very well produce a totally different industry model.

This is a critical point. The choices that industry sectors make with respect to these systems will in many ways directly shape the market for digital media and the manner in which digital media are distributed. This in turn will directly influence the options that are available to consumers, both in terms of the ease with which they will be able to access digital media and the equipment that they will require to do so. Poor choices made this early in the game will retard the growth of this market, hurting everyone's interests.

VI. IMPLEMENTING THE DMCA.

To avoid these problems, I ask the Committee to watch the implementation of the anti-circumvention provisions carefully for abuse. If those abuses appear, the committee should consider drastically pruning or eliminating the bias toward a "technology fortress" that the provision creates and instead move back to a system that simply punishes piracy, including piracy committed by means of circumvention. In addition, the Committee should encourage the Administration and the courts to properly clarify the following ambiguities in the anti-circumvention provisions. EMusic has been participating in the public comment process at the Department of Commerce and Office of Copyright that was mandated by the DMCA. The following suggestions grow out of what we have learned so far from that process. This Committee should carefully monitor the process and the recommendations that will be made by the Department of Commerce and the Office of Copyright later this year when they report back to Congress on their findings. It is important to recognize that despite some hard fought compromises in this area of the DMCA the fact remains that anti-circumvention is a complex issue. The DMCA recognized this fact and as a result mandated that the anti-circumvention provisions should not be implemented right away—a two year delay was set out. This comment process should not be taken lightly.

First, Section 1201(g)(2)(C) should be construed so as to insure the ability to circumvent a system for legitimate research in cases where the owner has refused to consent. Otherwise, advocates of a particular system would simply be able to deny all requests from "outsiders" for authorization to test the system.

Second, Section 1201(g)(3)(A) is especially dangerous because it presents a false dichotomy. It states that one factor in determining whether an individual falls within the encryption research exception is whether the individual disseminated information about the research in a manner designed to advance the state of knowledge in encryption research, or whether it was disseminated in a manner that facilitates infringement. This is a distinction without a difference. Every time someone disseminates information about a potential security flaw, it both facilitates the state of understanding within the legitimate information security community while at the same time notifying potential hackers of a new "back door." The identical information serves the same purpose, without regard to the manner in which it is disseminated.

Third, Section 1201(g)(3)(B) language which makes the "training or experience" of the person performing research on a system relevant to a determination of the legality of the research should be interpreted broadly. Otherwise, the language may be used to exclude a vast number of individuals who are otherwise perfectly capable and willing to lend their talents to strengthening encryption systems and expanding knowledge in this area.

VII. WHAT IS HAPPENING IN THE REAL WORLD TODAY?

Even though the anti-circumvention provisions of the DMCA are not yet in effect and even though the European Union and other important centers of intellectual property policy have yet to finalize their position on the issue, copyright manage-

ment systems are being proposed and one in particular touches upon the issue of anti-circumvention. EMusic has been a participant in the Secure Digital Music Initiative (SDMI) of the Recording Industry Association of America. While SDMI was initiated by the RIAA in the name of fighting digital music piracy, its ultimate goals and consequences remain unclear. When it becomes available SDMI aims to provide watermarking and rights management. In a sense, then, SDMI is a copyright management system.

Through the past several months the information technology industry and the traditional recording industry—the five major labels—have been negotiating the terms for licensing the SDMI trademark and logo that will brand products and services as SDMI compliant. While these negotiations continue, the issue of compliance with the DMCA and its anti-circumvention provisions arose many times. It was an issue of contention between the high technology industry and the traditional recording industry. EMusic took the side of the high technology industry. Other Internet firms involved in the distribution and marketing of music online also sided with the high technology industry. However, it should be noted for the public record that the five major record labels very much wanted to have language in the SDMI license that would effectively bind all SDMI licensees worldwide to the US law on copyright, the DMCA, and with specific reference to compliance with the DMCA's anti-circumvention provisions. Putting aside for now the challenges and problems resulting from enforcement of an extraterritorial application of US law to a fast moving and changing digital media industry, it is important to note that the recording industry asked for this licensing language even though the specifically cited provisions of the DMCA are not yet in effect and are, in fact, under review, in part, by the Department of Commerce and the Office of Copyright. Some members of the press have taken the view that SDMI is not about piracy at all and is really about an attempt to use a proprietary copyright management system technology coupled with trademark license to prevent open systems like the MP3 format from succeeding in the marketplace via the sheer market power the five major record labels bring to bear with their strong support for SDMI and noted opposition to MP3 and open systems.

SDMI is still underway and I do not want to turn my comments in a specific criticism of this one example of a contemporary copyright management system that depends on the anti-circumvention provisions of the DMCA. However, it is too important of a development to not mention at all.

VIII. INTERNATIONAL TRADE BARRIERS TO ECOMMERCE IN DIGITAL MUSIC.

Another issue that the DMCA indirectly touches upon insofar as it implements a significant copyright treaty is the issue of who gets a cut of the downloading transaction action. Since this Committee is reviewing the DMCA one year after its passage into law it is important for the Committee to be aware of new copyright issues, especially as they appear in the international context and in the context of electronic commerce.

Downloading a song from EMusic and other electronic retail websites involves two copyrights. First, there is a copyright for the sound recording. For example, many of us are familiar with Frank Sinatra and Tony Bennett versions of the same song. A record company typically owns the copyright to Frank's and Tony's sound recording of the song. Second, there is a copyright for the underlying musical work—the song itself. A music publisher owns the copyright and one has to pay for a license to the musical work before it can be legally distributed online. The fee for this license is set by US law (17 USC 115) at 7.1 cents. One can either pay the music publisher directly or the Harry Fox Agency.

The question for companies like EMusic today is one of jurisdiction on the Internet. Consumers from all over the world can access our site and purchase music. You don't have to be a US citizen or based in the US to obtain and use a credit card and other electronic payment systems. And since one downloads music (rather than has a physical product delivered to one's home) your physical address where you consume the download of 1s and 0s is irrelevant to consummating the transaction between EMusic and the customer. However, the collection societies in each country around the world are inclined to assert that they have a right to request payment of their statutory licensing rate fee for any transaction that they believe terminates or passes through their country. For example, when a consumer downloads a song from EMusic (a merchant based in California) to their PC in Germany, which rate should be paid—the US rate or the German rate? Also, what if the music publisher and the artist have contracted with the online distributor for a world wide digital distribution at one set rate and have stipulated jurisdiction? It is important to note that EMusic and other merchants really have no reasonable way to ascertain or prove where all of their customers consume the music they download. Without being

a physical product, digital downloads add a new wrinkle to the expanding debate over jurisdiction on the Internet. EMusic is exploring this fascinating issue and will testify before the European Commission in early November at their Internet jurisdiction hearings. We would be happy to continue a dialogue with the Committee on this important issue.

IX. CONCLUSION.

To conclude, Section 1201(g) of the DMCA as currently written has the potential to pervert the natural growth of the market in downloadable digital media, undermine the quality of the products in that market, lead to investments in inefficient technologies by both consumers and industry, and in the final analysis leave copyright holders no better off than they were before passage of this law.

EMusic is in favor of robust copyright management systems that actually work and that are based on open, transparent technical standards. Copyright management systems are necessary for the development of a sophisticated digital media marketplace. Such systems can be used to provide value added information about the content, to facilitate ecommerce transactions, to audit royalty payments to artists, and to engage third party firms in connecting their information and transaction services to content via the Internet. EMusic's concerns should not be misconstrued as some sort of break from the delicate compromise that was reached over a year ago to forge closure on the DMCA. I personally participated in the years of negotiations over copyright legislation here in the US as well as in Europe; I also participated in the World Intellectual Property Organization (WIPO) copyright treaty conference in December 1996. I fully realize how important the anti-circumvention provisions of the DMCA are to the copyright community and especially to traditional copyright holders in the music, motion picture and software industries. But those pre-Internet industries are not the only interests at play here. If the law of unintended consequences demonstrates anything it is that Congress should not pass laws that prescribe business models or technologies. Nor should Congress tolerate laws that benefit incumbents and harm new market entrants. Do not be fooled by the sirens wailing from the rocky shoals of Isle of Piracy in the great sea of data called cyberspace. There is much more at stake here than combating piracy; technological excellence, free speech, innovation, and competition are on the line.

Mr. SHIMKUS. Thank you. I was wondering. This isn't the site that the guy—the music guy on Doonesbury uses, is it? His is real time, though, I think. It shows my knowledge of the industry.

I would like next to go to Mr. Gary Klein, Vice Chairman of Home Recording Rights Coalition. Welcome. Your full statement is submitted for the record. If you would summarize in 5 minutes, with that you may begin.

STATEMENT OF GARY KLEIN

Mr. KLEIN. Thank you, Congressman Shimkus. Mr. Chairman, the Home Recording Rights Coalition consists of consumers, manufacturers, retailers and electronic servicers and was formed 18 years ago in response to attempts by the motion picture industry to ban the sale of video recorders to—

Mr. TAUZIN. Mr. Klein, would you pull the mike just a little closer. Thanks.

Mr. KLEIN. It seems hard to believe that anyone ever wanted to ban VCRs. In fact, for much of the last decade the movie industry has worked with us to pursue outcomes that offer them protection but do not intrude on a accustomed consumer rights. But today I must report that we may have come full circle.

We've helped develop technologies, known as technical measures, under the DMCA that may now be employed, over our objections, in a very anti-consumer fashion. Perhaps no good deed goes unpunished.

In 1993, in response to Congressional requests, the HRRC joined in negotiating with representatives of the motion picture industry

with the goal of drafting a balanced digital video recording act or DVRA that would address content owners' concerns over new formats and interfaces, but would also recognize and preserve the reasonable and customary practices of consumers.

The basic bargain was: In exchange for joint development of technologies that could block consumer viewing and recording, the movie industry would accept encoding or recording rules that would limit the application of the technologies to clearly recognized, stated, and defined means of product distribution, and no others.

After the initial draft of the DVRA was rejected by representatives of the information technology industry, the Copy Protection Technical Working Group or CPTWG developed technologies involving digital encryption, which potentially can block consumer viewing as well as recording. But we didn't worry, because we had a deal assuring us that, despite the use of these technologies, reasonable and customary consumer practices would be maintained in the digital era, the recording rules as Mr. Boucher has described them.

Congress actually borrowed and adopted those rules in 1201(k) of the DMCA that applies to analog VCRs. It was anticipated that digital technical measures could and would be enforced instead for multi-industry license agreements, but it is in the context of such licensing agreements that the MPAA has now dug in its heels.

Indeed, the use of encryption has allowed the MPAA to raise its objectives so as, in some cases, to endanger lawful consumer viewing as well as recording. If a program has been protected against recording by means of encryption, the MPAA does not want to allow a signal to pass between a settop box and a TV unless that interface is encrypted as well.

So what that means is the more programs the MPAA wants to protect from home recording by means of encryption, the greater the number of programs that consumers will be unable to view on digital monitors or TVs unless they have built-in encryption technology.

If the content owner arranges to cutoff the analog output of settop boxes, the consumer whose display device lacks built-in decryption is simply out of luck, even if he or she has paid to view the program. Obviously, Mr. Chairman, this was not what we had in mind when we said let's work together on constructive and cooperative solutions.

In disavowing the original digital recording compromise, MPAA cites the growth of Internet technology, potential expansion of bandwidth and the availability of new types of home recorders. But since the time of the 1996 DVRA compromise on recording rules, very little has changed that is relative to or should disturb the essential contours of the deal.

Motion picture companies still have the strongest interest in protecting their newly released content from copying until they have exploited the home video, pay per view, and video on demand release windows. The recording rules permit them to do this.

Nothing about the Internet or the emergence of new types of recorders with integrated hard drives has changed the distribution dynamic nor have consumer recording practices changed signifi-

cantly since the high tech industry agreed to develop these technologies.

In going down this road in 1993, the parties made a fair bargain about home recording that ought to be respected and, obviously, consumers should also be able to view the programs that they pay for.

We are willing to work with MPAA and other interested parties to develop appropriate technologies for interfaces not yet protected, provided that the MPAA or its members return to acknowledging these principles, as well as reasonable recording rules.

We are, to say the least, skeptical that source encryption of free, over-the-air TV broadcasts, which we understand the MPAA has been unwilling to rule out, is the answer to any of the MPAA members' problems, nor should consumer access to the Internet be threatened.

Finally, Mr. Chairman, let me just say consumers are not pirates. Pirates are pirates. In the examples Mr. Valenti showed, "Toy Story II" which he said is not in theaters at this point, unseen episodes of "Buffy, the Vampire Slayer"—well, where did they come from?

They didn't come from consumers downloading anything. They obviously came from somebody in the distribution chain who had access to the masters, made copies that would never be protected or encrypted anyway.

All a consumer would need to view pirated copies, whether they purchased them intentionally or not, is a playback device, not a recorder. We assume that the motion picture industry is not yet ready to declare all playback devices illegal.

So in sum, Mr. Chairman, having cooperated with Hollywood to develop these measures, we look forward to working with them again, but we will not sit back and see the measures we have developed turned back against consumers to exercise their accustomed rights.

Thank you, Mr. Chairman. I'll be happy to answer questions.

[The prepared statement of Gary Klein follows:]

PREPARED STATEMENT OF GARY KLEIN, VICE CHAIRMAN, HOME RECORDING RIGHTS COALITION

Mr. Chairman and Members of the Subcommittee: I am Vice Chairman of the Home Recording Rights Coalition (HRRRC). HRRRC is a coalition of consumers, manufacturers, retailers and servicers of consumer electronics and computer devices, dedicated to preserving the utility of such devices for consumers. On behalf of the HRRRC I would like to thank the Subcommittee for holding this very important hearing today, and for inviting me to testify.

It is appropriate that the Subcommittee hold this hearing on the occasion of the first anniversary—to the day—of the enactment of the Digital Millennium Copyright Act (DMCA). It is also worth noting that we have just recently passed another anniversary—the 18th anniversary of the decision of the U.S. Court of Appeals for the Ninth Circuit, in the "Betamax" case, that would have outlawed the sale of video cassette recorders to consumers. October also marks the 18th anniversary of HRRRC's formation, in response to that decision. (Next year, in addition to the Millennium, will mark the 16th anniversary of the Supreme Court decision that overturned the Ninth Circuit's decision and thus kept VCRs on the market.)

At this time of review and reflection, Mr. Chairman, it seems appropriate to ask: why would anyone have wanted to ban, as illegal, the sale of a device such as a VCR in the first place? To paraphrase the answer given by motion picture studios, "it seemed like a good idea at the time." Nobody would want to ban this device today, as it has been one of the principal foundations of the motion picture indus-

try's great success over the past two decades. But every so often—indeed, as it did when the DMCA was under consideration only a year ago—the call goes out to hobble, if not ban, new electronic devices that consumers would find useful. It has been HRRC's task to respond to such initiatives, to identify any reasonable objectives that may be behind them, and to seek a resolution that is fair to consumers. This Subcommittee and Committee were equal to the occasion when the DMCA was pending, and we welcome your interest now.

Today I must report that, only a year after passage of the DMCA, there are many issues under discussion that are of concern to us. Proposals made by the motion picture industry would imperil not only the ability of consumers to use new, digital devices for customary home recording; they would also threaten the ability of consumers to view programs that have been acquired through clearly lawful means and devices. This would be a very serious, though perhaps unintended, consequence of positions put forward by movie studios.

In my testimony today I would like to review the role that multi-industry technical working groups, as applauded and encouraged by Congress and the DMCA, have played in fashioning tools that can produce outcomes that are either beneficial or harmful for consumers. In this respect I would define as "beneficial" any outcome that makes content available by technically superior means without constraining consumers' reasonable practices and expectations. By "harmful," I mean outcomes that constrain such practices, or don't make the content available at all.

I will also discuss the role HRRC and my own industry, the consumer electronics industry, have played in actually enabling the potentially harmful outcomes over which we are now concerned—and why we feel they should be prevented. And I will discuss why it would be unwise, as it was when VCRs were introduced, to attempt to constrain *all* consumers because of things *some* potentially might do.

Home Recording Should Not Be Confused With Commercial Piracy

The fears that have been expressed over giving consumers the ability to acquire and use home video recorders were vastly overstated from the start. Home recording has often been confused, intentionally or otherwise, with commercial piracy. Home consumers are not pirates, and their ordinary and entirely legitimate practices do not have consequences that are remotely similar to commercial piracy.

Pirates go into business in competition with authorized program distributors, without making any attempt to acquire the rights to do so. They make copies in large batches, using professional equipment comparable to that used by the authorized distributor. By contrast, consumers generally record off the air, or play back copies that they have rented or purchased. Those U.S. consumers who do, wittingly or unwittingly, acquire pirated goods need to have only a playback device in their home. They don't need a recorder at all. So piracy, and its commercial impact, have nothing to do with home recording, or home recorders.

Nevertheless, commercial piracy is often cited as a reason to constrain simple home recording. Such arguments were not valid when the Betamax case was brought, and are not valid now, in the age of the Internet. Unauthorized commercial Internet distribution will occur, and will be addressed, whether or not consumers have access to computers, home recorders, or the Internet. The movie industry may have valid concerns regarding the unlimited transmission over the Internet of programming that they intend to make available on a restricted, or advertiser-supported basis. But these concerns should be addressed in a context of respect for consumers, and their lawful, reasonable, and customary conduct to date.

HRRC And The Electronics Industry Have Been Part Of The Multi-Industry Creation Of Powerful Technical Measures That Could Harm Consumers If Agreed Limits On Their Use Are Disavowed By The MPAA

There is an old saying, Mr. Chairman, that *no good deed goes unpunished*. For most of this decade, HRRC and representatives of the electronics industry have worked in good faith with the motion picture industry to develop powerful technical measures. Depending on how they are implemented, these technologies have the potential to bring home recording to an absolute halt. And, since they depend on digital encryption, they could shut off all consumer viewing that is not specifically authorized. Clearly, in cooperating in the development of these technologies, this was not what we had in mind.

Indeed, it was a condition from the very start of our talks with the motion picture industry that clear constraints would be placed on the potential use of these powerful technologies. The HRRC and the companies from the consumer electronics and computing industries insisted from the outset *that the tradeoff for giving copyright owners such powerful new tools would be the agreement of the studios to refrain from misusing such measures*. Accordingly, the studios, the HRRC and hi-tech companies

reached an accord on “encoding,” or “recording,” rules. *The rules limited the circumstances in which new copy protection technologies could be used to undermine consumers’ expectations and practices in unanticipated, and decidedly adverse, ways.* Today, however, we are on the verge of seeing these technologies deployed *without* the recording rules—the very consumer protections that were and are instrumental to their development.

I need to explain how we put ourselves in this position. From its founding in 1981 through mid-1989, HRRC successfully opposed any technical or legal measure that might have limited consumers’ abilities to record programming in the home. As we entered the digital era, however, the issues became more complex, and became subject to technological, rather than simply legal, compromise. In 1989, HRRC joined the recording industry in proposing what ultimately became the Audio Home Recording Act of 1992 (the “AHRA”). The AHRA involved a compromise technological solution preserving the right and ability of consumers to make digital copies of digital audio recordings, but not to make digital copies of those copies. This Committee played a key role in enactment of that legislation.

In 1993, responding to congressional requests, HRRC and MPAA proposed to join in developing a “Digital Video Recording Act” (“DVRA”), which would address concerns over new formats and interfaces, but would recognize and preserve the reasonable and customary practices of consumers. *The genesis of the deal reflected in the DVRA was that, in exchange for the cooperation of consumer electronics companies in developing and implementing technologies that could block consumer viewing and recording in certain agreed-upon and well-defined circumstances, the movie industry would accept “encoding,” or “recording,” rules that would appropriately limit the application of these technologies to clearly recognized, stated, and defined means of product distribution, and no others.*

For three years, HRRC, the consumer electronics industry and the MPAA negotiated in good faith to put this bargain into practice. In March of 1996 we announced agreement on a draft of the DVRA that would have done so. We had a setback when representatives of the information technology industry objected to the particular technical means that were anticipated and the legislative approaches we had contemplated. But then, representatives of all three industries formed *the Copy Protection Technical Working Group (“CPTWG”)*, and got back to work pursuing the same, agreed goals by other means. The technologies that were then developed were even more powerful than the ones that we had jointly envisioned with the MPAA for initial deployment. *Unlike the DVRA, the technologies developed at CPTWG involved digital encryption, which potentially can block consumer viewing, as well as recording. From our standpoint, however, it had always been intended that while we worked collaboratively to develop the tools to address and constrain recording practices, such tools would not be put in the hands of copyright owners absent a mechanism to enforce the compromise set of “recording rules.”*

The CPTWG still meets every month in Burbank, California, and the encryption-based technologies that were first proposed there are being licensed for use throughout the world. Just as these technologies are ready for application, however, the motion picture industry’s commitment to the other half of the bargain that had been struck—the “recording rules”—seems to be fading to black.

What are these “recording rules” that are the subject of so much discussion and the present debate? Simply put, they are rules that would permit, prohibit, or limit copying of programming, depending on consumer expectations and the medium of delivery. The final, detailed negotiation of the specific encoding rules took several years. In brief, the recording rules allow technical coding to be applied to content when it is distributed indicating whether all copying would be prohibited (the “never copy” state) or a copy could be made, but not a copy of the copy (the “copy one generation permitted” state). Essentially, the rules allow application of never-copy encoding to distributions that are relatively close in time to the date of theatrical release, but give consumers the increasing ability to record as distance from that date passes. The rules provide:

- *Never copy* encoding can be applied to packaged home video, pay-per-view, and video-on-demand programs.
- Consumers may record from subscription pay-cable channels, but “*no-more-copy*” encoding can then be applied to the *consumer copies*.
- Consumers would retain an unrestricted *right to record* from other cable channels or similar services, or from any programming originating as a free terrestrial broadcast.

Although the DVRA, in which these recording rules were spelled out, was never enacted, the Congress recognized, borrowed and adopted these rules in *Section 1201(k) of the DMCA*. However, section 1201(k) applies only to certain analog VCRs (primarily VHS format) and imposes a duty to respond to widely used analog

“Macrovision” anti-copy encoding. Section 1201(k) does not apply to digital video recording devices. In the DMCA, Congress did not mandate the use of any particular digital technical measures. It was anticipated that such measures could and would be enforced, instead, through multi-industry license agreements pertaining to encryption technology.

For the past year, such encryption technology (e.g., 5C “Digital Transmission Content Protection, or “DTCP”)—has been available for license, as anticipated. The developers of such technology in the consumer electronics and information technology industries have included, in the license agreement by which content owners would be licensed to use DTCP to protect their content, those same “recording” rules as are set out above. While not a party to those discussions, HRRC supports the principle behind the recording rules that are incorporated in the license that has been offered. They accurately reflect and incorporate the original bargain that led to the development of these technologies. We understand that, in the course of these license negotiations, the MPAA has now largely renounced any commitment to these rules.

The Use of Encryption Technology Puts Home Viewing, As Well As Recording, At Risk

This situation would be aggravating enough, Mr. Chairman, if our problems pertained only to home recording. However, because program encryption is now employed in the technologies developed for cable, satellite, in-home (such as DTCP), and potentially even terrestrial distribution of audiovisual programming, programs distributed digitally may also in some instances become *unviewable* by consumers who have paid for the right to view them. Consumers could find themselves in this position unless (a) their sets are licensed and equipped to decrypt the signal, or (b) they have a set-top box that does the decryption and provides the signal in a form useful to their TV set.

The fundamental problem is this: MPAA is insisting that high definition analog outputs from set top boxes be encrypted, or otherwise copy protected. (In-home digital encryption such as DTCP applies only to the *digital* outputs of such boxes.) Absent copy protection on high-definition analog outputs, MPAA has opined that perhaps its member companies would not license their encrypted programs to broadcasters, cable and other pay television distribution media to be converted to such “unprotected” outputs. This problem of support for HD analog outputs, difficult in its own right, is greatly aggravated by the MPAA renouncement of recording rules—because *the more programs the MPAA wants to protect, from home recording, by means of encryption, the greater the number of programs that consumers will be unable to view unless they have monitors with built-in decryption technology.* If the content owner arranges to cut off the analog output of the set-top box for such programming (or refuses to distribute at all where such outputs are available) the consumer suffers—even if the consumer has no intention of recording the program.

How many monitors today have this sort of decryption capability built in? None. You will hear today of the efforts by DTCP to license the technology to make such devices available. But with MPAA adhering to its rejection of the previously agreed recording rules, *manufacturers who go ahead and require products to respond to DTCP, without insisting on recording rules in the licenses to the studios allowing them to implement DTCP encoding, might reasonably believe they are dooming their products, and betraying their customers.* So a stalemate exists as to the very decryption technology that can defeat or enable viewing and recording in the digital age.

What is MPAA’s present position as to how many program sources it wants its members to be able to encrypt? Our understanding is that the answer is, now, *all of them.* We hope for some movement in this respect. It goes without saying, however, that the proposal to encrypt all programming, over-the-air, basic cable, along with pay television and pay-per-view, is one that has substantial public policy consequences because it affects the viewing, and recording, of all television programming. In the view of HRRC, accordingly, it raises a set of issues that are more than appropriate for public discussion.

The potential consequences, for consumers, of the MPAA adhering to its view that there should be no recording rules and that studios should have the freedom to encrypt all programming would be as follows:

- If the MPAA insists on carte blanche “recording rules,” even those consumers who have purchased the latest DTV and HDTV products, fully licensed with decryption technology, would not be able to record any program if it has been encrypted and designated by a studio or programming distributor as “never copy”—*even if that program originated as a free, terrestrial TV broadcast or was supplied over “basic” cable or over a channel to which the consumer has subscribed.*

- If a consumer has purchased a DTV or HDTV receiver not yet licensed for decryption, the consumer would not be able to *view* any encrypted program, unless transmission by some other means (e.g., component analog HD output from a set-top box) is allowed. However, MPAA states that its companies are not likely to allow transmissions over such “unprotected” analog outputs.

MPAA does recognize the unfairness of denying viewing to consumers who have already purchased DTV receivers. There are no readily implementable solutions, however, to accommodate such consumers and their receivers. The MPAA has not proposed any workable mechanism for doing so, even though such problems of viewability would arise directly from the exercise of the power that they seek—their ability to encrypt all programming.

Position of the HRRRC As To “Recording Rules”

HRRRC has not been a party to the discussions relating to the licensing of DTCP, or any other technology, that have been taking place over the last year between the promoters of technologies and the MPAA and its members. However, we were involved in putting the idea of agreed technical approaches, limited by “recording rules,” on the table, so we feel a responsibility that consumers not be shortchanged as a result. The HRRRC view on these issues is:

- MPAA cites the growth of Internet technology, and potential expansion in bandwidth, as contributing to its present disavowal of “recording rules.” *Nevertheless, since the time of the 1996 DVRA compromise, very little has changed that is relevant to or should disturb the basic deal.* Motion picture companies could still apply never-copy encoding to the content in the earliest release “windows”—movies packaged for sale or rental, or distributed through pay-per-view or video-on-demand. There has been no evidence at all that the dynamics of movie distribution have changed in this respect. Nor has the emergence of new types of recorders with integrated “hard drives” changed this distribution dynamic or its impact on “recording rules.”
- Consumer recording practices, at least with respect to broadcast and cable/satellite-delivered programming, have not changed significantly since the DVRA bargain. Acceding to the studios’ demands—that they be given essentially unconstrained flexibility to prohibit certain types of consumer recording—has not been shown to be justified economically, or in light of the studios’ present and future business practices.
- It is simply unacceptable to make content that consumers have lawfully acquired and paid for unavailable or degraded for *viewing* because an MPAA member regards the home interface between set-top box and DTV receiver as insufficiently secure. *If programs are to be encrypted, a non-degraded, alternate path, protected or not, must be available for consumers who need it for viewing.* We are willing to work with MPAA and other interested parties to develop protection for such a path, provided that MPAA or its members return to acknowledging reasonable “recording rules.”
- We understand that MPAA is concerned about potential redistribution of its programming over the Internet—a practice that, if taken to extremes, could compete with commercial distribution. As has been stated repeatedly, we are willing to work with interested parties in identifying sufficiently targeted approaches to address issues relating to Internet transmission, *without* penalizing consumers in their daily, reasonable viewing and recording practices, or in their access to the Internet.
- We are, to say the least, skeptical that *source encryption of free, over-the-air TV broadcasts* is the answer to any of the MPAA’s members’ problems. Congress, too, may well want to assess whether such source encryption is consistent with the public trusteeship concept for broadcast spectrum, and whether encryption would, in fact, further the public interest.

Technological Advances Should Reward Rather Than Punish Consumers

As taxpayers and supporters of the free marketplace, consumers have funded the very technological advances that now threaten their rights. This is not a new problem. For the past decade, the HRRRC has judged technological policy proposals that potentially could have an impact on consumer rights by asking these three questions:

- Will technology advance in some useful way?
- Will consumers receive a fair share in the improvement in technology (or will it all be applied to restraining or charging more for consumer practices)?
- Will the result be greater legal certainty in the marketplace (rather than litigation and attendant uncertainty)?

Going forward at this critical juncture in the transition to digital and broadband technologies, we think this Subcommittee should insist on answers to these questions. We pledge to work with the Subcommittee and all interested parties in achieving outcomes that provide to consumers a fair return on their investment in new technologies.

Thank you again for having invited me to appear today.

Mr. TAUZIN. Thank you very much. I might note, by the way that at least 3 or 4 of our members took down the name of that Website when Jack Valenti put it up. I'm not sure about consumers not being pirates.

The Chair is now pleased to welcome Mr. Michael Moradzadeh of Intel. Mike, I understand you are also going to have a video demonstration for us. So maybe we can get everybody ready with the lights, and let me introduce Michael Moradzadeh.

STATEMENT OF MICHAEL MORADZADEH

Mr. MORADZADEH. Thank you, Mr. Chairman. With your permission, I'd like to show the video at the end of the testimony, as it may be somewhat disruptive.

Mr. TAUZIN. You're on.

Mr. MORADZADEH. Thank you. First, on behalf of Intel and the other four companies that form DTLA, I'd like to thank you for the opportunity to be heard today.

Somewhat to my surprise, I find that I am able to say that I agreed with every word Jack Valenti said except that I will challenge him for the title of flagship industry of the United States. However, the real problem is not the commercial video pirates that he was pointing out.

Today we're here to talk about what happens in American homes. We're here to report on the status of our efforts to protect digital content in homes over home digital connections.

I have three points that I want to cover today. The first is that we have built a system for protecting movies over digital connections. The second is that that system enforces the same set of rules that Congressman Boucher described and that others have alluded to in their testimony. The third is that we are slowed up, because Hollywood has changed its mind about these rules, and they now want quite a bit more, including the ability to block all home recording.

The system we built is called 5C Digital Transmission Content Protection. It arose from a multi-industry effort that began in 1996, and the idea there was we were trying to build some technology that would keep honest people honest without the requirement of mandated—legislatively mandated technology. This is, however, a technical measure under the Digital Millennium Copyright Act.

DTCP, as we call it, provides protection for movies by encrypting them in one device, say a DVD player or a settop box, and then transmitting it over a home network or home connection to another device. I see we do have the demo, but we'll get to in a second—transmitting it to another device—it could be a digital TV or a PC—that decrypts the movie under a license.

The license which was issued to the manufacturer requires that the manufacturer have added something to the box as a condition of decrypting to be triggered to stop copying. There is also a re-

quirement that certain easily copied outputs are also controlled or have some anti-copy treatment on them such as Macrovision.

If we could just pause the demo for a moment—they are both connected together. Now one of the issues is this. If manufacturers are being asked to add something into their systems that automatically limits consumers' use of their product, they are going to want to know how it's used.

It's kind of like my car. I'm willing to have an airbag in my car, but I'm unwilling to have it there unless I know that it will only be triggered in a collision and not in normal driving. Similarly, we needed rules about how this "Do Not Copy" gets triggered.

The rules we went to, the rules that are reflected in the DTCP license that we delivered to the studios in mid-'98, reflect the same recording rules that we've been talking about here, the recording rules that were found in the DVRA proposed in 1996 and that were embodied in Section 1201(k) of the Digital Millennium Copyright Act.

The license itself is dirt cheap. It's offered on far below commercial rates, but it does contain limitations, field of use limitations on how it can be applied to inhibit consumer copying.

Now that we've built this system, we've licensed it out to over 30 companies, we built products, we've received a series of last minute requests from the MPAA. The first, which we've alluded to, is that the MPAA does not believe that any recording rules are appropriate. I'll summarize the other points very rapidly.

A few weeks later they asked that we find some way to keep all unprotected content such as TV off the Internet. There is some current lack of clarity over whether that applies to free TV or encrypted TV. The studios have suggested that all TV be encrypted, although again there has been some variation in that position.

Finally, the studios have said that they would like movie images on computer monitors to be degraded to 480 lines of resolution. Now a PC with one of these new DTV cards in it—that's the cheapest way a consumer is going to get digital TV for a while, and yet to inform consumers that the quality of their experience is being intentionally degraded seems like an insult to consumers and a very difficult thing to sell.

The concerns raised some serious issues. Our companies are very willing to work with the MPAA to address those, both individually and through 5C. Intel, for example, is building a new technology to protect the digital link to new monitors.

Other companies are building other pieces of the solution, based on a common understanding of how they would be used. However, on this particular issue, on the adoption of this protected link, we do need to understand how it will be used and reach conclusion on that, because in the meantime consumers are waiting for it to happen.

Thank you, Mr. Chairman.

Mr. TAUZIN. Thank you very much, Mike. Do you want to demonstrate now.

Mr. MORADZADEH. If I may, very quickly. Bill, if you will start it up.

What we have here is a—you will see on the set-up over on the table, there's a black consumer electronics device. It, in fact, is a digital VCR, but it could be a DVD player. It could be a settop box.

What it's got is a protected 1394 output, protected with the 5C DTCP. What's coming out of the—well, it is. What's coming out of the system right now is content that is marked uncopyable or "Copy No More." What that means is, when it goes out digitally, it shouldn't be copied.

We've connected these two large screen monitors to a PC that is also equipped with DTCP 1394 technology. So it is decrypting the technology, decrypting the signal, under a license that requires that it not be copied or that, for situations where one copy is permitted, that one copy be made in an uncopyable fashion.

The other box that, unfortunately, is faced away from you—but, Bill, if you will just stand up and point to it—is a garden variety computer, although both do have Intel inside, but it is not equipped with 5C DTCP. When a "Copy No More" signal is being transmitted over it, all you get is a black screen.

Now right now you're seeing a commercial for a product that I've never quite figured out exactly what it is, but this commercial is marked "Copy Free," and it is appearing on both screens, both the compliant DTCP licensed computer and the noncompliant, because copy free content, as far as we know, doesn't need protecting. That was certainly the arrangement that we had all understood.

Now you can—can you turn that monitor so it's visible to the committee? You'll see on this noncompliant computer monitor a black square where the copy protected content would have appeared, but it doesn't appear there because it's inaccessible to the computer without the license, and it's as simple as that.

We didn't need an Act of Congress to be able to design the technology, but we do appreciate the DMCA which provides additional legal capability for protecting it in the case of collateral attack.

[The prepared statement of Michael Moradzadeh follows:]

PREPARED STATEMENT OF MICHAEL MORADZADEH, INTEL CORPORATION, CHAIRMAN,
DIGITAL TRANSMISSION LICENSE ADMINISTRATOR, LLC

Mr. Chairman and Members of the Subcommittee: My name is Michael Moradzadeh, I am the Chairman of the Digital Transmission License Administrator, also known as DTLA or "5C." I am also Director of External Legal Affairs at Intel Corporation. On behalf of Intel and the other four companies that developed the 5C Digital Transmission Content Protection system, I would like to thank you for this opportunity to discuss the efforts we have undertaken over the last several years to give consumers and content owners better access to each other through digital technology.

The 5C DTLA was formed by five companies: Intel, Hitachi, Ltd., Matsushita Electric Industrial Co., Ltd., Sony Corporation, and Toshiba Corporation. This led to the "5C" nickname. Our mission in creating DTLA was to combine the best our companies had to offer to develop a system for protecting content over home digital connections. Today, I'd like to talk about 5C DTLA's protection system and its progress in bringing entertainment content more firmly into the digital world.

Many of today's comments may seem to resist suggestions made in the name of copyright protection, so I'd first like to point out that my own company, Intel, is a strong supporter of copyright protection. We sell nearly thirty billion dollars worth of products that rely at least in part on legal protection for the copyrighted works embodied in them. We maintain an active antipiracy program and have successfully litigated copyright infringement cases even on our core microprocessor products.

Today's discussion, though, is not about whether copyrights should be protected, but how and when.

5C DTCP IS A TOOL TO DELIVER CONSUMER ACCESS; FEAR OF THE FUTURE IS BLOCKING IT

We're here, in part, because of an initial multi-industry consensus about how and when to protect digital movies from unauthorized copying. That consensus was reflected in the Digital Video Recording Act proposal offered up by the MPAA and consumer electronics industry in 1996, it is reflected in terms under which we offered our DTCP technology at deeply sub-commercial rates, and it is reflected in section 1201(k) of the Digital Millennium Copyright Act.

To implement that consensus, which carefully balanced content owner wishes and existing consumer recording practices, we built a technology to copy-protect connections between DVD players, PC's, digital TV's, and even cable and satellite settop boxes. We undertook our work at the urging of the entertainment industry, and devoted significant technical resources to getting it done. However, having delivered exactly what we promised, and having received technical approvals across the board, we now find that the game has changed.

Instead of supporting the DTCP system for use as originally planned, the major motion picture companies are now seeking to create significant new policies and burdens at the expense of consumers and manufacturers as a condition of accepting this protective technology.

I'm speaking to you today because this positioning may have impact on the adoption of digital television and the deployment of next-generation digital cable devices. More importantly, it may take away from consumers their ability to access the new digital content in a usable form.

I would also like to note that the concerns raised here are largely independent of any particular technology or proposal. Whether we are talking about DTCP, a cable specification, or some other system entirely, today's issues relate to the proper balance between the interests of entertainment distributors, consumers, and the technology industries.

WHAT WE BUILT

This development arose from some of the most remarkable cooperation among the computer, consumer electronics and entertainment industry I have ever heard of. Following the proposal of the "Digital Video Recording Act of 1996," and its rejection for mandating anticopy circuitry that my industry found would be both burdensome and ineffective, the three industries formed a technical working group to explore technical solutions to protect entertainment content.

Our goal was to develop technical protections adequate to "keep honest people honest."

One outgrowth of that working group was the definition by all three industries and subsequent development of Digital Transmission Content Protection or "DTCP" to allow a protected connection between digital devices. It encrypts video being sent over digital connections and then decrypts them at the receiving end for display.

The decryption technology is available to manufacturers under a license that requires the receiving device to obey "do not copy" instructions included in the encrypted signal. This license also requires manufacturers to provide protections on certain outputs, such as NTSC video, to prevent VCR copying.

System Description

Let's start with a box which has some digital copy protected content in it. It could be a DVD player, PC or Settop Box. The content in it is encoded with a "do not copy" state.

Instead of using the analog connection on the back of the box, we want to use the digital connector, in this case IEEE 1394, also provided by some companies under the terms "iLink" or "Firewire." This connector lets us use a digital TV or PC-based system to enjoy our movie with digital perfection.

License terms for certain DVD players and other digital devices call for digital connectors like these to have copy protection on them. Without such protection being present, a DVD player, for example, would not even let the movie go out over the wire. So the sender will have 5C DTCP programming or circuitry to encrypt the movie before sending it out. The receiver will also have a 1394 connector and, hopefully, 5C DTCP as well.

When the two devices are turned on and connected to each other, they recognize each other over the 1394 network. Then the 5C DTCP content protection system begins its three fundamental operations:

The first step is authentication. Using well-known and thoroughly tested cryptographic techniques, the sending device asks the receiving device to demonstrate whether it also is equipped with 5C DTCP by responding with an authentic code,

known as a "certificate." If the device fails to respond with the certificate, then the 5C DTCP system will not transmit protected data to that device.

If the device produces an authentic certificate, the sending device then checks the certificate to determine whether that certificate comes from a known hacked device. If the certificate is found on a list of certificates that have been revoked by the DTLA, then the 5C DTCP system will not transmit protected data to that device.

If the device passes these two tests, then the content will be encrypted and transmitted along with an encrypted key to the receiving device. The 5C DTCP selected an algorithm already in commercial use for protected satellite television transmissions, and which can be built into CE devices and computers, in hardware or software, without significant expense to consumers.

Over at the receiving device end, this encrypted content is coming in and gets sent to an internal 5C DTCP module. It uses the derived key and the algorithm to decrypt the content inside the system. The content is protected because the receiving device or software was made according to a license that specifies how to keep the content safe, including requirements concerning the making of permitted copies and only using secure or protected outputs.

Today, this technology is only being provided for video on IEEE 1394. Efforts are underway to apply this same technology to Universal Serial Bus and other connectors, and to adapt it for the much more complex environment of audio content.

WHAT'S THE COST

Technical costs of implementation are designed to be minimal. License fees are far below commercial rates for technology licenses, and essentially cover costs of administration. Total cost to a licensee in 1999 is \$18,000, plus a nickel per device for the certificates that we have to generate. Our contract calls for us to reduce fees as costs go down, which we expect to happen as volumes increase. Other than asking movie owners to contribute the same \$18,000 annual fee as billed to manufacturers, and to pay for the costs of any device revocation they request, there is no charge to the content industry. This is one of the least expensive licensed technologies available.

We made the costs so low because the member companies of DTLA believe that both they and the market are best served by imposing as low a barrier as possible to technology which is intended merely to provide interoperability. Further, given that this technology has the effect of removing capabilities from a device that could otherwise make recordings, we felt it somewhat mean-spirited to charge any amount not commensurate with our costs.

Fees to studios are similarly just nominal. This is not a typical commercial technology transaction, but instead a technical implementation to enforce a balance of rights; studios are able—and encouraged—to benefit from this technology without any kind of per-title fee. We do ask the studios to bear any costs relating to putting a particular certificate on the "hacked" list, since they asked for us to develop and implement this certificate revocation capability. Moreover, the license imposes recording rules defining when home recording of broadcast signals can be limited or freely permitted, so as to prevent a content owner from arbitrarily shutting off consumer copying where custom and consensus—the same consensus described above—have permitted it.

We have included other parts of the consensus, including a contract-based right of content owners to sue for non-compliant implementations of licensed devices. We have also designed the technology to fall within the scope of sections 1201(a) and (b) of the Digital Millennium Copyright Act, giving aggrieved studios a second route of action to protect their interests.

BARRIERS TO ADOPTION: FEAR—UNCERTAINTY—DOUBT

Many independent companies and organizations have subjected us to technical review. 5C DTCP has been incorporated in standards by the IEEE, Society of Cable and Telecommunications Engineers, Cable Labs and the International Telecommunications Union. The Motion Picture Association of America, Cable Labs, the National Association of Broadcasters and the National Cable Television Association have publicly stated to the Federal Communications Commission that they believe 5C DTCP is a robust and mature technology. It is ready for implementation in consumer digital products.

Yet, even with the progress we have made to date, we have yet to see broad implementation of the system. One reason is that, despite technical support, and the encouragement they have provided us privately, motion picture studios have yet to provide any kind of general public support or adoption of this technology. Without strong content owner support for a system, manufacturers adopt a "wait and see"

attitude in the face of uncertainty. Meanwhile, more digital products are made and sold in a cycle that eventually can only be described by reference to horses and barn doors.

Movie studio reluctance to commit support for the use of 5C DTCP has been surprising and disappointing to us. In particular, this reluctance seems to be based not on technology grounds, but on a wish to secure policy concessions and engineering commitments that go well beyond the capability of DTLA or its member companies to provide.

We released draft license terms in June of 1998, and we began licensing product manufacture in September of 1998, once we got our export approval. After about a year of near silence from the studios, having only received vague comments there were concerns with the "recording rules" and that there were other "drafting issues" we began to get a series of formal comments.

Unfortunately, the "issues" have turned out to be a series of requests from June to October directed to our five companies that not only undoes the basic framework under which we have been working, but goes well beyond what is in our capability to deliver. These include:

- A demand to eliminate all recording rules, so that a studio would have the power and the right to block all consumer copying (including time-shifting) at will,
- A requirement that 5C DTCP encrypt all programming, including over-the-air broadcast television, so as to prevent programs from being sent over the Internet, and
- A requirement that computer monitors degrade their picture quality when displaying high-definition digital movies.

The studio representatives have also informed us that they still have more drafting issues.

Blocking Copying: Recording Rules

In May of 1999, MPAA representatives finally informed the DTLA that they considered themselves "no longer bound" by the long-standing framework for recording rules because "we aren't getting everything we asked for in the DVRA." That is, movie studios now wanted the unlimited ability to use our technology to block copying of broadcasts, and even to block access to content through devices they deemed untrustworthy.

These recording rules, sometimes called "encoding rules," had had their genesis in the original compromised legislative proposal between CE and MPAA to protect digital content: the DVRA. This proposal had defined several states which devices would be legally required to honor:

- **Copy Never**, for which all copying is prohibited.
- **Copy Once**, allows one generation of copies, which are marked "Copy No More."
- **Copy Freely**, for which no technical protection is used.

Arbitrarily applied, this arrangement could have made many products with record capability useless if broadcasters turned on the "Copy Never" signal all the time. So the proposed legislation had included limits—recording rules—on the power of the movie industry to block customary consumer recording of particular types of content. As one participant in the DVRA process put it: "If I'm going to let you put a knife to my throat, I want to be sure I know how you're going to use it."

It was agreed that only pay-per-view, video on demand, and packaged media (DVD or tapes) could be encoded with the supremely restrictive "copy never" bits, while premium channels, like HBO or Showtime, could be encoded as "copy once." To be consistent with existing consumer practices, free and basic programming, like over-the-air broadcasts and basic or extended basic cable, would not carry any technical anticopy signals.

While this legislative proposal had met opposition on technical grounds and was dropped in 1996, our voluntary private cooperation to deliver a similar result in DVD and elsewhere is based on this same framework. In fact, this precise tradeoff between required recognition of anticopy signals and limits on their use is found in Section 1201(k) of the Digital Millennium Copyright Act.

To learn in 1999 that the studios intended that the technology we've been building for four years was there to put themselves in control of all entertainment in the home is quite startling.

The studios are now, in effect, asking us to create an "off" switch in our customers' new digital devices that, without any notice or discussion, can block copying, time-shifting, or even access to entertainment, education, and news programming transmitted. If the studios are "no longer bound" by the framework we have been supporting, will they also require the ability to use watermarks, invisible signals in digital and analog video and audio, to interfere with traditional consumer practices as well?

One proposal that the studios have floated to help make it easier to block consumer copying and to attempt to regulate the Internet is that all broadcasting should be encrypted, even free, over-the-air television, so that better control can be exerted over the receivers in American homes.

Internet

The DTCP license terms are designed to inhibit Internet transmission of protected content. However, the studios have now asked that 5C DTCP now protect *unprotected* content. The studios have concluded that digital retransmission of even their broadcast programming over the Internet represents a threat to their businesses, or at least the businesses of their broadcast affiliates. Their concern is that someone in, say, New Jersey, create a video stream for the Internet and send it to a friend in California, depriving someone of a legitimate business opportunity.

As a group, individually, and as members of our respective industries, we acknowledge the concerns of these rightsholders. The concerns, while directed to a future several years out at best, are neither trivial nor frivolous. We don't think that 5C DTCP necessarily holds the answer, however. Because we built an anti-copy system, its applicability to blocking the transmission of copiable, unprotected materials is speculative at best. Nonetheless, we have offered, and restate our offer to engage on this issue. Our industries have worked to resolve prior issues, and we can address this one as well, but 5C cannot solve this problem alone or dictate a result to the world.

Degrading Screen Resolution

Another new issue is a proposal, first made only a few months ago, that higher definition video be intentionally degraded in a computer or in any other device having better than standard definition connectors. The goal of 5C DTCP, and the CPTWG project that led to its development, was to protect signals transmitted over digital buses and to support open interoperability (some call it convergence) between CE and PC devices. MPAA companies now insist that until a new system is developed to protect analog signals between the PC box and the computer monitor, that the video signal should be "dumbed down" to a maximum of 640 X 480 resolution. In other words, the display would either be less than full quality or smaller than full screen size.

The 5C have told the MPAA that we are willing to work toward addressing their concerns. Indeed, acting independently, Intel has made substantial progress toward a Digital Video Interface specification with content protection that would facilitate protection for future digital monitors. However, higher rates of resolution have been the norm for even low-end computers many years, and there is substantial, well founded resistance in the computer industry to making this change. Consumers have a right to expect that more expensive DVD drives and digital TV tuner cards will produce high quality signals that reflect the monitor's full capabilities. It is unfair that consumers who make the investments in such new technologies should be denied the best possible viewing experience.

KEEP ON WORKING

Despite these new demands, and rumors of even more startling ones being considered by the studio group, we continue to explore options for resolution. In particular, on several of the issues which are clearly beyond the 5C's power to mandate, such as screen resolution or Internet retransmission, we have proposed the formation of a small, focused working group composed of known effective participants from the affected industries to see whether creative solutions may be developed. It is not even clear that 5C need play a role.

On other issues, we remain committed to seek input from our adopter customers and to work with the studios to find a common ground of trust, shared interest, and service of the consumers' needs.

VIGILANCE AND OVERSIGHT ARE REQUIRED TO ASSURE A FAIR AND SUCCESSFUL OUTCOME

The Digital Millennium Copyright Act wisely declined to attempt to legislate into place any particular scheme for protecting copyrighted works in the new digital space. Instead, the Act penalizes those who would deliberately destroy technological measures that effectively protect these works. This formulation fosters innovative solutions to rapidly-changing technical challenges, and is applicable to not one, but many approaches.

We are relying on the DMCA to add security and legal protection to our system, with the ultimate goal of seeing it be used to provide ubiquitous access to high-value content. And while we mostly want to be left free to develop our solutions for pack-

aged media, broadcast, cable and Internet, we are acutely aware of the importance of the public interest.

This interest exists not just as a market factor but as a matter of policy. If we ultimately reach a result that deprives consumers of access to the country's communications infrastructure, or that places control of products in the home entirely in the hands of seven movie distributors, or even that forces consumers to pay a significant technology tax just for the privilege of protecting one industry segment's profits, then we think we should be hearing from you.

Keeping an eye on us will help keep us honest people honest.

Thank you for your attention today.

Mr. TAUZIN. Thank you very much, sir.

Mr. MORADZADEH. Thank you.

Mr. TAUZIN. Our final witness, who will be Mr. Rondal J. Moore, Vice President of Business and Legal Affairs of Rioport.com, Incorporated.

Mr. Moore.

STATEMENT OF RONDAL J. MOORE

Mr. MOORE. Thank you, Mr. Chairman. On behalf of Rioport.com, thank you for inviting me to testify today.

Rioport, together with Diamond Multimedia, designs and markets what some have called the Twenty-first Century Walkman, the Rio handheld music player, and a digital download platform for obtaining and organizing electronic music files.

With the Rio you can record music, news programs, audio books, and take them with you wherever you go. Using the Rio audio manager software application on a PC, you can organize music in many different ways, freeing yourself from the inconvenience of having to skip music on disks or tape that you don't really want to hear, sort of the A and B side problem.

Rio audio manager also links to the Rioport.com Website in a way that makes downloading simple and convenient for the average consumer. Rioport.com, in conjunction with partners like Emusic offers downloads of thousands of audio tracks.

Emerging bands offer free downloads to create awareness with new audience as they lack the marketing muscle of the major record labels, and established bands use free downloads to promote sales of new CDs or sales of concert tickets or other merchandise.

Increasingly, consumers are being offered music for sale at 99 cents per song or \$9 for the equivalent of a CD. The Rio arrived on the recording industry's doorstep about a year ago, almost coincident with the passage of the DMCA.

As Mr. Klein noted, the MPAA would like to make playback devices illegal. The recording industry has already gone down that path, and we felt that we were offering a new important technology from which all could benefit. The recording industry saw us as a danger to their entrenched distribution system.

In their zeal to attack the Rio, the RIAA claimed that the Rio had only one purpose, to support Internet piracy, a theme that we've heard both the recording industry harp on about a year ago and the MPAA here we have heard today oppose vociferously.

Nothing could have been farther from the truth. Today I think that the RIAA is actually pleased that they lost the case. From that case, the secure digital music initiative sprang into open forum. That was joined by, as Ms. Rosen noted, 120 different companies. Before that it was a closed initiative making little progress.

One short year later portable devices like the innovative Rio are made by companies like Thompson, RCA and Sony, and these and more than 100 other companies are cooperating to develop a secure system for distributing music via the Internet.

SDMI can deliver that secure system for music distribution, but I'm concerned that the ultimate success of this system depends not on its design but on the willingness of the music industry's five major labels who dominate the current distribution channels to release a significant number of tracks for online distribution.

If this market is to reach its full potential, in addition to access to music, several legal issues must be resolved. First, this subcommittee is already grappling with issues such as Internet taxation, digital signatures, encryption and privacy. All of these issues are important to every company that is engaged in e-commerce.

Second, deployment of broadband Internet access must be extended to all Americans, and barriers to providing such access need to be removed. Now this initiative is as important to today's economy as rural electrification was earlier this century.

Third, current copyright principles which are based on physical phono records need to be updated to reflect distribution of electronic files over the Internet. For instance, Section 110(7) of the Copyright Act exempts music played in stores from the payment of royalties due to the promotional nature of the use. Internet retailers need the same—have the same need to provide consumers to preview music, and the Act should be clarified to explicitly recognize that need.

Similarly, the law should clearly distinguish between digital downloads of music that transfer a copy to the end user, which is similar to selling a CD from a regular store, from the streaming webcasts which are public performances similar to radio broadcasts.

Currently, performing rights organizations in the recording industry try and characterize digital downloads as being both a public performance and a mechanical license, and they ask the digital download companies to pay the royalties twice. A music for sale business model should not be burdened with more royalty payments merely because the sale is electronic and not physical.

Finally, as we've heard from others, the global reach of the Internet offers tremendous opportunities to provide global distribution of music in an extremely cost efficient manner.

Cost efficiency and global reach are the major focuses of the Internet, and that should be promoted with laws that harmonize the copyright collection procedures across boundaries and that remove barriers from digital files moving across the Internet.

I appreciate the subcommittee's interest, and I'm ready to answer questions, as you may have. Thank you.

[The prepared statement of Rondal J. Moore follows:]

PREPARED STATEMENT OF RONDAL J. MOORE, VICE PRESIDENT, BUSINESS AND LEGAL AFFAIRS, RIOPORT.COM, INC.

Mr. Chairman and Members of the Subcommittee: My name is Ron Moore. I am Vice President for Business and Legal Affairs for RioPort.com, Inc. On behalf of my company, thank you for inviting me to testify here today. This hearing, like the Subcommittee's efforts last year in re-calibrating the Digital Millennium Copyright Act, recognizes two competing interests that, in truth, should be shared, unifying goals:

the promotion of digital media technology that will drive consumer acceptance of electronic commerce; and the need for copyright policies that balance the interests of content providers, technology companies and, above all, consumers.

In my testimony this morning, I would like first to tell you about RioPort.com and the online music market, then to discuss the legal challenges that threaten the development of electronic music sales.

RIOPORT.COM AND THE RIO 500—THE REVOLUTION'S HERE

RioPort.com, a new company created recently from the computer peripheral manufacturer Diamond Multimedia Systems, designs and sells a digital audio delivery platform that includes "the Walkman of the future"—the Rio 500 handheld personal music player. As small as a pager, and weighing less than three ounces, the Rio plays one to two hours of music recorded digitally from a personal computer. The Rio has no moving parts. Instead of tapes or discs, the Rio stores music on a small memory card, similar to the cards used to store photographs in digital cameras.

The Rio records audio files from a personal computer, primarily music and spoken word recordings such as news, audio books or radio programs. So, for example, a jogger can download from the RioPort.com website music from thousands of artists who give away or sell their music over the Internet, or he can record favorite tunes from his CD collection, and take high fidelity music on the road. Or, a commuter can download news programs or audio books to listen to on her morning commute. The Rio lets you set and reset the order of songs for playback. The Rio automatically can set up to 16 bookmarks, so you can instantly return to segments in a news program that you would like to listen to again, or pick up in an audio book precisely where you left off. There are no worries about CDs skipping or changing tapes. A single AA battery provides 13 hours of power. Quite simply, the Rio and other handheld MP3 players provide consumers with a compact and convenient personalized sound experience wherever they go.

Of course, Rio users also need music and spoken word programs for their players. The Rio and Rio Audio Manager software application provide an easy-to-use, fully-integrated platform from content provider through handheld player to provide consumers a powerful new set of tools for enjoying audio. RioPort.com partners with record and Internet audio companies to provide quality music and spoken audio for downloading by all Internet users. For example, in the music category, we offer free downloads from new releases by rock artists such as the Eurythmics and Stone Temple Pilots. Our spoken word offerings include classic comedy routines from Bob and Ray, health programs and, in time for Halloween, readings from Edgar Allen Poe, Anne Rice, Washington Irving's "Legend of Sleepy Hollow," and a radio adaptation of Mary Shelley's "Frankenstein."

Most of these audio tracks are available for free, as a way for established artists to generate interest in a new CD or concert tour, for new artists to gain exposure that potentially will lead them to a record contract, or for publishers to promote sales of books and audio books. Increasingly, our partners are selling tracks that we download to consumers, generally for 99 cents per song. Interestingly, consumers are not just buying new rock or rap acts, as you might expect. They are purchasing classic recordings from many of our greatest artists, such as Marian Anderson, Billie Holiday and Bob Wills and his Texas Playboys. Right now, sales are modest. But considering that the first portable MP3 player—the Rio 300—was released in the United States less than one year ago, this is truly a remarkable start for an exciting new industry.

WHAT'S MP3 GOT TO DO WITH IT?

All this was made possible because of a technology known as MP3, developed as a digital audio format for movies on CD under the aegis of the Motion Picture Experts Group (MPEG). Until recently, downloading music from the Internet was an excruciating process, requiring the skill of an alchemist and the patience of a monk. A typical song in full CD audio format could comprise a huge file of 40 megabytes or more. To download that 40 megabytes over a typical 28k or 56k modem connection took more than an hour. Any transmission errors would result in a 40 megabytes of useless bits, an expensive and wasted Internet session, and a very frustrated consumer who would debate whether to start again or just throw the computer out the window.

MP3 compresses the size of the original music file by about a factor of 11. That 40 megabyte song file is only around 3 megabytes in MP3. Suddenly, that hour-long 56k modem download takes only 5 minutes. Over a broadband connection, such as a cable modem or DSL line, a song can be downloaded in less than a minute. And the sonic quality of MP3 compares favorably to the experience from a full CD, par-

ticularly since MP3 music most often is played through headphones on the go or through computer speakers.

Although the MP3 format has been around for a decade, about two years ago, the Internet suddenly exploded with MP3 files. At the vanguard of the MP3 revolution stood tech-savvy music fans. Using a software process known as "ripping," fans transferred music from their CD collection into MP3 files on their computers and laptops, to listen to music at work or on the road. Not surprisingly, these files soon were being posted onto the Internet and other computer networks where they could be shared with music fans around the world. MP3 files and free player software spread throughout the Internet and the educational community.

The almost viral proliferation of MP3 understandably raised concerns in the established record industry, as brand new CDs would be uploaded to the Internet the day they hit the stores "sometimes even before they hit the stores. But MP3 also proved the role of the Internet as a great technological equalizer. Independent record labels and undiscovered musicians immediately embraced MP3 as an invaluable tool to market their music without incurring the costs of pressing, distributing and marketing compact discs. Soon, major recording artists such as Alanis Morissette, the Beastie Boys and Tom Petty began offering free MP3 downloads of songs from their new albums. Even popular artists, such as The Offspring, whose works were widely pirated on the Internet began to believe that the MP3 "threat" was overblown, inasmuch as they still were selling millions of CDs. Now, it is common practice for artists to release promotional MP3s to generate buzz for their new albums. Alternative artists, such as the ground-breaking rap group Public Enemy and the prolific rock duo They Might Be Giants, are selling their new recordings only over the Internet at 99 cents per song and \$8.99 for the entire collection.

Today, tens of thousands of bands in every genre post their music to the Internet. Some claim that the direct relationship between artist and consumer created by MP3 and the Internet someday may eliminate the role of the record label. Others contend that the record label will become even more important, but that the days of the brick-and-mortar record store are numbered. What is undeniable is the powerful influence MP3 is exerting on the music industry and the Internet. Although we have yet to see a major artist broken through MP3, I am confident that it is only a matter of time until popular MP3-based artists like Red Delicious or Trance [] Control find their way into the traditional offline music market.

RIAA V. DIAMOND MULTIMEDIA SYSTEMS: THE WAR IS OVER; WE ALL WON

The value of MP3 initially was, shall we say, underappreciated by major record labels, which focused on the potential for piracy rather than on the commercial opportunity. It was not so long ago when, unfortunately, we were at war with the RIAA. In September 1998, we announced the introduction of the first-generation Rio handheld MP3 player, scheduled for November 1998. In October, 1998, the RIAA filed suit against us in United States District Court, contending that the Rio violated the Audio Home Recording Act of 1992 ("AHRA") because it did not incorporate the SCMS serial copy protection system. Now, given the central role of the House Commerce Committee in crafting the Audio Home Recording Act, you may recall that the AHRA applies only to certain types of digital audio recording devices, and that it specifically exempts multifunction personal computers. To us, it seemed clear from the defined terms in the AHRA that a device that records music files only from exempt personal computers would also be exempt. Moreover, since the Rio only has a headphone jack and no other output, you can only listen to a Rio and cannot copy music from it. Thus, a Rio with SCMS would behave no differently than a Rio without it.

The district court judge agreed with us and denied RIAA's request for a preliminary injunction against bringing the Rio to market. On June 15, 1999, the U.S. Court of Appeals for the Ninth Circuit affirmed. The Ninth Circuit held that the Rio was not subject to the Audio Home Recording Act, noting that the Rio without SCMS inherently permits less recording than a digital audio recording device with SCMS. Moreover, the Court confirmed that, to the extent that the Rio was intended to permit consumers to make their existing music collections more portable—what the Ninth Circuit termed "space-shifting"—using the Rio for such paradigmatic non-commercial personal use is entirely consistent with the purposes of the Audio Home Recording Act.

I think the RIAA is as pleased as we are that we won that litigation, because ultimately we always shared the same goal: Building a legitimate market for music over the Internet. Even as the lawsuit was being prosecuted, the legal standoff between the recording and Internet industries rapidly gave way to a collaborative effort to create standards to secure the electronically-delivered recordings against un-

authorized redistribution. Diamond Multimedia and RioPort.com were among the earliest members of this effort, known as the Secure Digital Music Initiative ("SDMI").

THE CHALLENGES AHEAD: BROADBAND DEPLOYMENT, PARITY OF RIGHTS WITH OFFLINE RETAIL, AND ENABLING INTERNATIONAL SALES

This has been an exhilarating and exhausting year for RioPort.com, but we recognize that the market for recorded music is still in its embryonic stages. Success on the Internet today does not guarantee long-term survival. Many challenges lie ahead, with many roadblocks in our path.

Among the obstacles to a robust electronic commercial marketplace are legal issues that revisit debates resolved years ago for the physical commercial world. I know that this Subcommittee and the Commerce Committee have worked to address many of the legal problems that face all Internet companies, including RioPort.com, such as domestic taxation of Internet sales, digital signatures, encryption and privacy. Another critical issue for building e-commerce in music is the need for widespread deployment of broadband technology. Purchasing music by downloading will draw consumers online only when it is fast and convenient. Broadband Internet connections permit delivery of the equivalent of an entire compact disc within minutes. That degree of immediacy will have a tremendously beneficial impact on the consumer as well as the recording and online industries. RioPort.com therefore also appreciates the efforts of this Subcommittee to grapple with the complex public policy issues implicated by broadband, and to craft legislation to stimulate competition for broadband delivery.

Additional issues particular to sales of music over the Internet must be sorted out in the years to come. First, will SDMI succeed and, if so, what impact will SDMI have on the market for sales of recorded music? In many respects, SDMI is merely accelerating a process that would likely have occurred de facto among a few market leaders, but SDMI is accomplishing this in a more open forum. RioPort.com believes that the market for recorded music will not reach its full potential unless reasonable and workable rights management tools are available to recording companies. However, these tools must balance flexibility for the consumer with protections for recording companies. Customers reasonably should expect that music they purchase electronically will be as useful and valuable as music they purchase today in physical stores. Despite numerous speedbumps and potholes, and the clash of cultures among the participants, SDMI appears still to be on the road toward this goal. I remain optimistic that the collective determination and energy of the recording, consumer electronics, computer and Internet industries will bring SDMI to a rapid and mutually acceptable conclusion.

Second, if and when SDMI does produce workable standards, will the record companies make good on their anticipated commitment to release works in electronic form? Today, the major record companies are using the electronic marketplace only for promotional purposes. They release a few promotional tracks for electronic downloading; or provide CD purchasers with a website address and a key to download a bonus track. This experimentation is encouraging, and we hope the record labels' experience will instill in them confidence in the Internet marketplace, so that it will only be a matter of time until the true digital record store carrying a vast catalog of virtually all recorded music becomes a reality. We also hope that the record companies will see the wisdom of granting distribution rights to those entrepreneurs who are building today's business on the Internet, and that they will not merely retain those rights for their own websites. Indeed, only the promise of broad access to recorded music justifies the current investment of computer and Internet companies into e-commerce and SDMI. If that access never materializes, the online music market may suffer the same fate.

Third, if we are to make digital downloading a successful business, we have to resolve the thorny issues of digital music rights. Some of these issues should not be tough to resolve, in that they require us only to extend principles from the physical world into the online space. For example:

- *Exemption for Music Performed in Online Retail Establishments.* There already exists in the Copyright Act an exemption from payment of music rights fees for music performed publicly in record stores. 17 U.S.C. § 110(7). This exemption, which has been part of our copyright law since 1976, recognizes at law the rather commonsense notion that record stores should not have to pay copyright owners for promoting the sales of their copyrighted sound recordings. Over the last few years, Congress has attempted to extend copyright rights into the digital environment. We believe that it also makes sense to extend the limitations and exemptions in the Copyright Act so as to promote electronic commerce. To main-

tain parity between “brick and mortar” and online sales establishments, the privilege that applies to today’s physical record stores should extend into the online environment, and clearly apply to digital performances of both the underlying musical works and the sound recordings which embody them.

- *No Double-Dipping against Distributions by Transmission.* The law currently draws sharp lines between the distribution of physical copies of sound recordings and the public performance of music. As noted in the September 1995 “White Paper” Report of the Working Group on Intellectual Property Rights of the Information Infrastructure Task Force, “[w]hen a copy of a work is transmitted over wires, fiber optics, satellite signals or other modes in digital form, so that it may be captured in a user’s computer, without the capability of simultaneous ‘rendering’ or ‘showing,’ it has rather clearly not been performed.” Some want to blur or ignore this distinction by claiming that selling sound recordings by digital transmission is a public performance as well as a sale and, so, that e-commerce companies should pay music publishers twice. Such double-dipping is unacceptable. E-commerce will fail if it is burdened with duplicative payments not required of physical retailers.

The far more challenging issues pertain to international rights. The Internet as a global marketplace offers unprecedented opportunity for the music and recording industries. Manufacturing, marketing, inventory and shipping costs will no longer stifle companies’ ability to sell inexpensively and immediately overseas. Yet there is no greater threat to the potential of this market than the existing trade barriers erected over music rights. Record companies traditionally have parceled out markets to international affiliates or other record companies. Some international copyright royalty collecting societies have asserted the right to collect multiple times on the same transaction—once at the point of emission and again at the site of reception; but even where only one international payment is due, different rates are charged in different countries, payable to numerous sets of different rightholders. Administration of these rights might be somewhat easier if an e-commerce company reliably could know the location of its customers. But in the Internet environment, we do not always know with certainty where the end customer resides.

RioPort.com obviously cannot be saddled with an impossible obligation to prevent international sales. Yet, we also recognize that the proper parties should be paid for their rights. In many respects, this issue is analogous to the problem of Internet taxation, where the potential for multiple states exerting taxing authority over a single transaction threatened to stifle e-commerce aborning. Members of this Subcommittee wisely led the way toward a moratorium on Internet taxation, so that an orderly and workable tax regime could be developed for implementation. For e-commerce in sound recordings, we believe a similar international effort may be needed over the next months and years, to bring order, predictability and efficiency to Internet music sales.

In summary, Mr. Chairman, this is a time of exciting opportunity for the creative and entrepreneurial business communities. The transition to electronic distribution poses economic changes equally as revolutionary as the invention of recording technologies themselves, and new, more challenging legal issues. But unlike that prior transition, we do not have the luxury of knowing that it will take decades before these problems come to a head. We are operating on Internet time, where paradigms shift in a matter of months. However, some basic principles will remain constant. We will capitalize on these global opportunities by giving all parties to the ecosystem a reason to migrate to electronic commerce:

- For the consumer, by combining the ease and immediacy of online transactions with the value they have come to expect from physical purchases.
- For copyright owners, by reducing production and distribution costs and providing for secure rights management.
- For online distributors, by assuring predictable legal requirements while building efficient administration mechanisms.

Thank you, Mr. Chairman and members of the Subcommittee, for your interest and your support in making electronic commerce a reality for business and the American consumer. I would be pleased to answer any questions you may have.

Mr. TAUZIN. Thank you very much.

The Chair will recognize himself for 5 minutes, members in order.

Let me try to put this in the context that we face it as members representing constituents who happen to be consumers of these wonderful products, services and devices.

Basically, Jack, you put your finger on the problem in your opening statement, and that is that in a digital age it's possible to make unlimited numbers of perfect copies, and we all understand that. We also understand that consumers now have certain expectations that may change, depending upon what rules are concocted regarding home recording.

Consumers' expectations generally right now—they're not going to copy pay-for-view programming, and they're not going to copy, as someone pointed out, movies rented from Blockbuster or what have you. But their expectations are indeed that they can copy some things.

As Hilary pointed out, they can copy some music and put it together in their own format at home. They can copy some television programming for later viewing, etcetera.

The concern that I think we are beginning to hear is that now in a digital age, with the background of the Act we passed in place, that technology is now going to be available, as Michael pointed out, to effectively declare what is copyable and what is not; but the rules under which that will be determined are going to be decided in some sort of contract compromise between the recording industry and those of you in the computer industry and related consumer products industries, and that once that compromise is agreed upon, that consumers' expectations may have to alter, depending upon the terms of the compromise, and that those consumer expectations, having been changed by an agreement made by industries—having been changed, the expectations changed, we are probably going to hear from them in big numbers.

Why would you let this happen? Why did you let our expectations not be realized in this new world? So from the standpoint of those of us who return home every 2 years and get approval for our jobs, we are going to have to answer why did we allow their expectations to be dashed, if they are going to be dashed, in the exercise of compromises made in the rules of the road now.

I need you to come back to me on that. Jack, you want to start. Then I want to get a few of you to just dialog with me on it.

Mr. VALENTI. Mr. Chairman, what you said is very sensible and makes good sense. If I were in the Congress, which I always wanted to be and, unfortunately, never was able to make that dream come true, I would feel precisely the same way.

There is no sound more perilous than the angry buzz of the multitude called voters. So I understand that. Now let me be as clear as I can, as unambiguous as I can. As of this moment, time shifting continues. Everything the consumer is doing now, the consumer can continue to do. Time shifting was what all the brouhaha was about for many years.

That will continue, no question about that. But the digital world, Mr. Chairman, is something that is very mistily observed. Nobody—Nobody knows what it's really going to be.

I was at a business conference in Sun Valley with the titans of the computer industry, i.e., Bill Gates of the computer chip industry, i.e., Andy Grove, Warren Buffett, the head of Dell Computer, Amazon.com, Yahoo, and you name it, as well as the moguls of the movie industry and television industry and the investment community.

I asked several of these well known legends, tell me where we are going to be in the digital world 3 or 4 years from now. Without exception, they all said, we haven't the foggiest idea. But as one famous name in the computer industry said to me, all I'm doing is trying to position my company so I can take and manage whatever curve is rising.

So I'm saying to you, we are dealing with an ephemeral situation here full of dark shadows, full of unlit corridors that we are walking down. I'm saying to you I don't know where it's going to be. However, I also know that the consumer needs to be able to do what he's doing now.

Now the negotiations that are going on right now, I have to say, are going on in good faith. There are no villains on the other side. Every one of the people at this table who are involved in those negotiations are honorable people who are doing their damndest to try to protect the people they represent, and I don't blame them. That's what we all do, but there is no antagonism. There is no deliberate attempts to sabotage. Good people on both sides.

This is a very complex, complicated situation.

Mr. TAUZIN. Oh, yes; oh, yes. You took us from clarity to mystical and ephemeral observations.

Mr. VALENTI. And into the fog. I want to come out of the fog here.

Mr. TAUZIN. Can somebody add to what Jack has said before—my time has expired, but you can answer. If someone can add to that clarity for us, where is it really going, and would you guys conclude your negotiations? Is it going to be a fait accompli, and consumers are going to say, well, what the heck, we can't do things we always thought we could do?

Mr. VALENTI. Well, I'm saying time shifting is there, Mr. Chairman. That's part of the negotiations.

Mr. SAWYER. Mr. Chairman, I would ask unanimous consent that you have another 3 minutes to complete your questioning.

Mr. TAUZIN. I would very much appreciate that. Thank you, sir.

Mr. SAWYER. If, in fact, you would ask Mr. Valenti, what is time shifting?

Mr. VALENTI. That is recording a program, say, that goes on at eight o'clock at night, and you're at dinner and you want to watch it tomorrow at 2:30 in the afternoon. So you time shift.

Mr. SAWYER. Very clear.

Mr. TAUZIN. It's also what you do in budgeting if you want to count the money in—that's another story.

Mr. Moradzadeh.

Mr. MORADZADEH. Well, I think the point, Mr. Chairman, that you raised is quite right. In considering some of the suggestions that motion picture companies have made as to what we might do today to alter the consumer experience as they move to the digital world, we've been very, very conscious of and concerned about changing what happens at home.

Suggestions which would have prevented time shifting of certain programming were especially troublesome. Now we have been exploring many possibilities, but anytime we came close to a proposal where the consumers would lose a right that they currently enjoyed, lose the ability to time shift, lose the ability to choose what

TV or what device at home they enjoyed entertainment on, we become very, very concerned.

As we entered into our effort to build 5C, to build the digital transmission content protection, we thought we were building a technology that would simply capture the consensus, capture the consumer expectation, and preserve that.

One of the issues that we have been grappling with and haven't even figured out enough for either side to develop a firm opinion on is what do we do about the future. The future will be different. That's the only thing we know for sure.

There will be different business models. There will be far more avenues for entertainment content in digital and perhaps other forms to come into the home, and there will be at some point, especially in the video space, competition and a robust competition for how to deliver content to the home.

There, we will be looking at the possibility of working with the other industries toward changes to the 5C so that we are able to satisfy all kinds of new business interests as they are addressed; but for today, we were unwilling to put complete power over how consumers view video into the hands of one industry group.

Mr. TAUZIN. And the longer that debate goes on, the longer new products are kept from the marketplace. I mean, that's part of our conundrum here, right?

Mr. MORADZADEH. Not only are new products kept from the marketplace, Mr. Chairman, but also some existing products are brought into the market which make changing consumer expectations more difficult.

Mr. TAUZIN. Exactly. Mr. Harter, and then I'll yield to Mr. Boucher.

Mr. HARTER. Thank you, Mr. Chairman. Consumers have a lot of expectations about digital media products, and I can only speak to music. I don't have a lot of experience yet with video, but I think what happens in the long haul for music, downloading music files over the Internet will have some implications for downloading video files.

I can say that the early adopters of this revolution in downloading music are typically people who are—some are voters, but most are 25 years and younger. They are in high school and college.

They are very comfortable with computers. They have access to decent broadband networks, and they like music. Forty percent of the music purchased is by people of that age group, and it's a very important demographic to watch in trying to ascertain the future for consumer behavior.

I can tell you that, when they download a track and they pay for it, they probably are going to be pretty firm on their expectation that, if they pay for a song, that they can have a copy of it on their personal computer, on their portable device like the Rio player, on their car stereo, and Intel and other companies are building local area networks to the home.

So in a sense, you have a hard drive in your house where all your video and music and all the data files are accessible, whether in your bedroom, your kitchen, down in the basement, and in a sense, if you purchase some music while driving your car or if

you're at Starbucks buying coffee, you can hotsync your device where you purchase it and upload it to the mother hard drive so you can enjoy it, no matter where you are. You can organize it, manipulate it in the house under fair use. You can share it with your family members.

I think that's where consumers' minds really are. It's a very important issue to get your hands around. I think this committee could look at that issue more closely down the road.

Mr. TAUZIN. Thank you very much. The Chair now yields to the gentleman from Virginia, Mr. Boucher, for a round of questions.

Mr. BOUCHER. Thank you very much, Mr. Chairman. I'd like to use my time this morning to address a practical problem and see if there can be a consensus developed among this panel of witnesses about what the solution should be.

There is a reluctance today on the part of equipment manufacturers to introduce the new digital recording devices, because of uncertainty about the application of the new 5C encryption technology for various applications of the content.

This is really not a new issue for us. We wrote a very comprehensive resolution of that precise problem with regard to analog recorders in the DMCA, and it is contained in Section 1201(k). That was a common sense solution.

It basically said that, if the consumer has a reasonable expectation that he can make copies, that expectation will be honored. If he has no reasonable expectation that he can make copies, then he is not going to be able to, and we translated that general principle into precise examples.

So, for example, if you go to the Blockbuster store and you rent a movie and it's a prepackaged product, you've got no reasonable expectation that you can make the recording of that, and under the rules set forth in 1201(k) that recording cannot be made.

The equipment manufacturers will have to recognize the Macrovision technology that prohibits the recording, and with the agreements that have been made with the industry with the content owners, Macrovision will be encoded on movies such as that.

Moving down the scale one step, and again realizing the expectations that consumers have, if you subscribe to a television service that's a premium service such as HBO, you can make one copy of that HBO movie. It's delivered to you only once, and for time shifting purposes you may want to view it at some other time. So the agreements in place allow you to make one copy of that HBO movie.

Moving one step further down the scale with regard to over-the-air television and basic cable television, the consumer can make as many copies as he wants. Now these arrangements are perfectly in line with consumer expectations and at the same time require that the analog recorders recognize and respond to the industry's Macrovision technology.

Why can't we simply apply this same set of common sense principles to the debate that we now have? That debate is what are the rules going to be with regard to the arrival of digital recorders.

I would like to get responses from our panel members this morning about the appropriateness of simply applying that same set of

common sense rules to the problem that we now have. Mr. Moradzadeh, I'd like to begin with you.

Mr. MORADZADEH. Well, basically, what we have attempted to do is apply precisely those rules to digital content in order not to upset consumer expectations. So the draft agreement that we have presented to the motion picture studios, as well as the agreements that we have already put into place and signed with over 30 manufacturers, reflect exactly that set of expectations.

Mr. BOUCHER. Mr. Klein?

Mr. KLEIN. Congressman Boucher, as I'm sure you recall, 1201(k) was originally derived from the encoding rules that were part of the 1993 agreement of the original DVRA between the Motion Picture Association and members of the consumer electronics industry.

Going back to consumer expectations, certainly, one of the reluctance of manufacturers to come out with new products that would respond to this copy protection technology is that, if I can borrow Lenin's phrase about capitalists selling the rope to their own hanging, they are in a sense agreeing to essentially obsolete their own products, because if they do not know that a content owner will not lock up the content, well, then they can essentially be rendering their own devices useless, since free over-the-air broadcasting can be locked up at the source.

So the recorder that responds to that copy protection technology would be useless. So at this point, I think that's the reluctance, but I agree that simple encoding rules that were part of 1201(k) should simply be carried forward.

Mr. BOUCHER. Thank you, Mr. Klein. Mr. Dawson, would you care to comment on this question?

Mr. DAWSON. Well, I think Mr. Moradzadeh said it exactly right. I think we're trying to make sure it's as transparent as possible.

Mr. BOUCHER. Now, Mr. Valenti, what we have is a statement from the equipment manufacturers and the computer industry that it would make sense to simply apply the Section 1201(k) solution which was carefully negotiated, well balanced, and a part of the DCMA to the debate we now have before us, which is the arrival of digital recorders. What is your response to that?

Mr. VALENTI. I think that we would be willing to make the same deal on digital that we made on analog in the DMCA, but the computer industry, I don't think, will accept that. We would be quite willing to make that deal.

Mr. BOUCHER. Well, I heard Mr. Moradzadeh say that he has presented to you a proposal that would do precisely that. Did I misinterpret you, Mr. Moradzadeh?

Mr. VALENTI. Well, there's a lot of rhetoric—Let me just finish this, Congressman.

Mr. BOUCHER. Well, let me just say I'm delighted to hear your answer, because maybe we have this issue resolved. It's very rewarding to hear that.

Mr. VALENTI. See, here's the issue. I wrote down a little note. In 1996, Mr. Klein talked about, there was a deal where we agreed that we would have limitations on what we could copy, if we got in return a legislative requirement that all digital recording devices, including computers, would have to respond to copy control signals and programs.

Now, frankly, the computer industry killed that deal before any legislation could be done. Now today we are being asked to pay the price—that is, copy control limitations—without the benefit of a legislative mandate or something that devices would respond to our copy control information.

So we would take—if you just take the language of analog in DMCA and make it digital, we're on the way to a solution.

Mr. BOUCHER. Well, that's a very encouraging response. Mr. Chairman, I would ask unanimous consent for 1 additional minute.

Mr. TAUZIN. Is there any objection? Hearing none, the gentleman is recognized.

Mr. BOUCHER. Mr. Valenti, what I assume then from that response, that you would agree to an arrangement where, just as in the case of Section 1201(k), you would be in a position to apply the 5C encryption technology to the prepackaged products where there is no consumer expectation that copying would be made, that you would then allow one copy for things such as the HBO movie that's presented on the premium cable subscription, and that you would not encode at all the items that would come over over-the-air television or basic cable.

Now that's the situation for 1201(k). That's the situation for analog. I understood you to say that you would agree to that for digital. Do you, in fact, agree?

Mr. VALENTI. First, Mr. Boucher, I'm not going to get into negotiations. We are dealing in sensitive anti-trust problems here. I've got more anti-trust lawyers in the room than we have negotiators, because this is a sensitive issue. So I don't think that it's quite proper or appropriate for me to negotiate with this committee in public.

I will say again simply and clearly, if we applied the analog protocols that are in DMCA to digital, I think that we would be well on our way. Now that's a simple way to put it.

Now keep in mind, however, that there are some interesting things here. We are not really debating legislation, Mr. Chairman. What we are debating, really, is we are talking about licensing terms that are trying to be imposed by five companies on us to protect, frankly, their manufacturing devices, and I have no problem with that. But I'm saying to you, we have no guaranty that the technology being offered by the 5C companies is as advertised, whether it will work or not.

That's an issue. No one is sure of it, and they can't guaranty it either. That's okay. We understand that.

Mr. TAUZIN. Can you run the demo again one more time?

Mr. VALENTI. But I want to say again, this is high priority stuff for us, Mr. Boucher. Our whole future—I literally mean the whole future of the American movie and television program, the content providers—without the things we create, none of these machines would be worth a damn, and everybody understands that.

If we can't protect that in this new digital binary number environment, we're dead. So I go back again. Let's put the digital—we make digital the same language and protocols that we had in analog in DMCA, and then I think we take it back to the negotiating group, and we go forward.

Mr. BOUCHER. Well, thank you, Mr. Valenti. Let me simply say it was a high priority when we wrote 1201(k). We all understand the priority, and to the extent that we can apply those same rules, that would be a very good solution. I'm glad to hear your comments, and I thank the other members.

Mr. TAUZIN. Thank the gentleman. The gentleman from Florida, Mr. Stearns, is recognized.

Mr. STEARNS. Thank you, Mr. Chairman. Let me take a little different approach. You know, around my house when I complain, my wife takes her index finger and her thumb, and she takes it and rotates it like that, and she says, my heart cries for you, she tells me. You've heard President Bush say don't cry for me, Argentina.

Let me just take the approach. I mean, we've got some very powerful, wealthy individuals here today complaining about a lot of things, but I think you folks are doing pretty well.

Ms. ROSEN, let me take you back to 1970. Two Hollywood studios unsuccessfully sought to stop the Sony Betamax from coming to market in the late seventies. They lost their case in the courts, and VCRs have produced enormous revenues for them in the market.

Your industry sought to block the MP3 player from coming to market, but similarly failed in the courts. Is there a parallel here between that and what we're talking about, the Sony Betamax? I mean, are we sort of overreacting here?

Ms. ROSEN. With all due respect, Congressman Stearns, I don't think that you either heard or read my testimony nor the testimony of the Diamond folks.

Mr. STEARNS. That's probably true.

Ms. ROSEN. Because indeed I haven't complained about a thing today. I am probably the most optimistic, enthusiastic person at the table. I think we are doing just fine in the music business, and I wish I could lose every lawsuit that I lost the Rio case with so well, because the result has been a tremendous development of strategy and working together and marketplace solutions in the music space that is bringing consumers a whole new host of issues.

So I think that the general assumption that you make, that the entertainment industry would be against technology, is No. 1, clearly wrong.

Mr. STEARNS. No, no, no.

Ms. ROSEN. Let me just say one more thing. The other notion—you know, we have made a lot of decisions in the music space about what consumers' access should be to music, and I think everybody at this table involved in those decisions would say that the music industry has gone very, very far, clearly much farther than what's in 1201(k) for video and the like. But those have been decisions essentially based on our marketplace perspective of what the consumer wants.

We are in the consumer products business, too. We care about selling, and we know that unless we can provide value for the consumer, giving them something that they want, all they are going to do is go up on the Web to find some other site to get it for free.

So we're not—you know, we're very clever about this opportunity.

Mr. STEARNS. Reclaiming my time here, I think what the consumers are telling me: Okay, the industry has digitized information, and now they are going to encrypt it, and it's going to make

it a whole lot harder for us. And the average Mom and Dad with their family at home is fearful that they won't be able to do lots of things that they do in their TV room.

For example, you know, VCRs in the first two decades, two decades of home recording, there's been a lot of changes here. So I think, if any of you can help the consumer have some level of confidence that what you're not promulgating is encrypted, digitized information that is going to make it harder and harder for them just to do the normal things—and I only bring up what happened in the seventies and what happened to the MP3 to show how the industry reacted, went to court.

You know, I don't know if we are yelling fire here when perhaps we don't have to be so concerned. Yes, Mr. Harter?

Mr. HARTER. Thank you. Another example is DiVX, a failed enterprise to compete with DVD, DiVX and—panel, please correct me if I'm wrong here, because it's not my main business, but DiVX was a consumer technology that would control number of copies a consumer could view, a pay for use technology.

DiVX closed its doors this year at a loss of \$300 million. So despite the success and wealth of the high tech industry, there are many losers out there on the information superhighway. I think DiVX and other examples from the software industry and the e-commerce transaction industry—complicated security schemes often end up punishing law abiding consumers, and the bad actors who will pirate or hack still have the aptitude to hack around even the very best solutions from major companies that try their very best to prevent bad actors from doing the wrong thing.

So I think when you look at security, you have to weigh its complexity and its impact on consumers, which is often more negative than positive, and how simply that people are trying to punish, the bad actors, the pirates, can continue their business, because they have access to tools to get around the security.

Mr. STEARNS. Mr. Klein, did you want to make a comment?

Mr. KLEIN. Yes, just quickly. In my day job I also—I'm Vice President of the Consumer Electronics Manufacturers Association whose members make the devices that Mr. Valenti said wouldn't be worth a damn without the content. So I feel like I have to defend at least some of them.

He's right, to a degree. Certainly, the devices don't work without content, but the devices also have provided a distribution stream that has provided an incredible amount of money for Hollywood. So I think we have this symbiotic relationship, and we do need to work together.

In response to your question about giving people at home some guaranty that their devices will work, well, again we're talking about being able to encrypt free over-the-air broadcasting. In essence, what I hear Mr. Valenti saying is let's take the L out of the play button and just make it a pay button.

Mr. STEARNS. That's what I'm hearing, too, and that's why I said to Ms. Rosen I was hoping she would give me that guaranty that the family at home won't have to worry about losing this versatility, this flexibility they have, they've had for two decades, because the history has been that they have sued and prevented these things.

Mr. KLEIN. Exactly. As far as legislatively licensing, as you recall, one of the things in the DMCA, in addition to 1201(k), was an encouragement to the industries to get together and to work out voluntary agreements and licenses that would resolve the problem in the digital age. I think the whole process of 5C and the MPA negotiations are encouraged by DMCA.

Mr. STEARNS. Thank you, Mr. Chairman.

Mr. TAUZIN. I thank the gentleman. That's a quotable phrase, take the L out of the play button. We're going to hear that again.

By the way, the new majority would like you to quote a guy like—well, anybody but Lenin, maybe Adam Smith.

Mr. KLEIN. Maybe it was John Lennon.

Mr. TAUZIN. Might have been John Lennon. The gentleman from Tennessee, Mr. Gordon.

Mr. GORDON. Thank you, Mr. Chairman. Mr. Klein, as I was coming back from voting, you were finishing up your discussion. So I didn't hear all of it, and also I didn't hear you being introduced.

It says you represent the home recording rights coalition. Who are the major partners there? Who are your major supporters?

Mr. KLEIN. Electronics servicers, small businesses, equipment manufacturers, consumer groups, and thousands and thousands of consumers.

Mr. GORDON. Do those thousands and thousands of consumers pay dues to you?

Mr. KLEIN. No.

Mr. GORDON. This is benevolent? You are representing what you think they want? I mean, they are not paying dues or telling you what they want or anything of that nature? Is that correct?

Mr. KLEIN. Yes.

Mr. GORDON. Okay. Now as I was coming in, again I heard the last part of your discussion, and you seemed like you were making a parallel that, you know, we've heard that guns don't kill, people kill. You were saying that consumers don't steal.

In terms of talking about this—I guess "The Toy Store"—I never saw the movie, but the one that Mr. Valenti was mentioning earlier that was being downloaded before it was even out on the market, and it was sort of like consumers don't steal, that it was their fault because they let somebody steal it from them somewhere in the production chain, is sort of what I was hearing.

So I guess I'm interested in is your thoughts. Let's just say a consumer is walking down the street, and somebody in the alley says, hey, come over here, I've got a box of Intel chips, and with this box of Intel chips I've got some copyrighted software, and I can sell it to you at a tenth of what you would have to pay in the store; and by the way, it's not even in the store yet.

Now what would you think about that consumer? Would that consumer be stealing? Would that consumer be a part of something that wasn't right?

Mr. KLEIN. If the consumer, obviously, knows that it's pirated material, then obviously it would not be right for a consumer to purchase that pirated material. Sure. But what you have to remember is, specifically in the examples that Mr.—How do you get a copy of "Toy Story II" if it hasn't even been released in the theaters yet?

Mr. GORDON. Just like somebody might have gone into the Intel warehouse and stole some of their chips. But maybe let's say, well, what about somebody is—you're going down the street and you find out that somebody stole your car, and then they took your car, and then they are driving it down, and they come up to somebody on the street and say I got too many cars at home, so I'm going to give you a really good deal on this car; I'm going to sell it to you for \$100, this multi-thousand dollar car. But you know, I didn't bring the title or anything with me, but you know, I'm going to sell it to you real cheap.

Does that consumer have any kind of responsibility there?

Mr. KLEIN. Well, growing up in New York City where most transactions start with "Hey, buddy," I'm not sure how to answer that, and it's sort of—with all due respect, I think we're just off the topic.

First of all, that—

Mr. GORDON. I thought that's what you were talking about. When I came in—

Mr. KLEIN. What I'm talking about is—what I said is consumers are not pirates. A consumer who record at home is not a pirate. A consumer who uses his VCR or any recording device to download material that he's paid for or has a right to see is not a pirate.

Mr. GORDON. All right. So if that consumer wasn't on the street but our entrepreneur has this box of Intel chips and software, and they go knock on your door and say I got these really good Intel chips and software, I'm going to sell them to you for a tenth of what they are in the store and, by the way, they're not even in the store yet—so does the consumer—would he have a problem there, since he's in his own home or her home?

Mr. KLEIN. Congressman, if you know that property is stolen, it's obviously not ethical to purchase stolen property.

Mr. GORDON. Okay. You know, again I just came in. I'm just trying to get caught up on what was going on in the middle of a statement.

I really want to know a little more about—Mr. Valenti, if you have sort of facts and figures, I am concerned about the economy in this country, and I am concerned that, with so many things going on so well, that sort of what you look at now that is our biggest liability is our trade deficit.

I think that could be a problem that could unravel all the good things that are happening. You know, what are the facts and figures in terms of your industry in terms of net export versus what we're importing?

Mr. TAUZIN. The gentleman's time has expired, but the witnesses will be able to respond, anyone who wants to respond. Mr. Valenti?

Mr. VALENTI. Very quickly, the intellectual property community exports today close to \$70 billion worth of material. It is, in total, a surplus balance of trade.

The movie and television industry has a surplus balance of trade with every country in the world with whom we do business, and it's over 140. The total amount of money that we estimate is a surplus balance of payment for intellectual property is probably \$15-\$20 billion a year.

Mr. GORDON. Thank you.

Mr. TAUZIN. I thank the gentleman. The gentleman from California, Mr. Cox, is recognized.

Mr. COX. I know that Mr. Harter in his testimony had a specific section of the DMCA in mind. I'd just like to invite any member of the panel to tell us whether they are prepared to, virtually in legislative language, give us any suggestions for changes in the law, because it's been a fascinating discussion and I've learned a lot. Yes?

Mr. MORADZADEH. In a sense, I'd like to respond negatively. The DMCA very wisely stepped back from the idea of mandating legislative—legislative mandating technological capabilities and devices and said, you know, the Internet is moving too fast, technology is moving too fast. It's not the job of Congress to try to architect the next generation of PCs; you guys go do that.

If you build a protection system in it, we'll make it possible to protect it. Somebody attacks it, just as if somebody is going door to door selling pirated Intel chips, we'll make it possible to sue them, to call the FBI or international help, if it's under WIPO.

It raises the issue of the proper role of encryption and the role that encryption plays in some of the solutions that we're providing here. It is not so much intended as this armored Fort Knox solution. What it is intended to do was two things: One, as protected by the DMCA, provide a better protection for movie content than was originally envisioned with just, you know, the dots that were originally proposed, a couple of little flags in the content, or even Macrovision which you can circumvent with some readily available devices in the back of airline magazines.

The other purpose of encryption—and this is how we came about it in the first place and one of the reasons we had broad multi-industry support for it—is by using encrypted streams to manage what's protected content versus what's open content. You are able to segregate within the digital economy and, important to me, within a computer the content that you need to check, that you need to watch, that you need to verify—this needs a watermark detection; you need to look at these signals—and the content that you don't need to worry about.

Now why is that important? It's important, because in a computer you do a lot of things besides watch movies. In fact, there's a lot of ways you can get value out a computer without Hollywood. You can play games. You can do software. You can surf the Internet.

Mr. COX. You could even do work.

Mr. MORADZADEH. You could—is my boss watching? But some proposals would have it that, whenever you are doing all these things, including work, I suppose, you would always be checking the information that's flowing through the computer to make sure that it isn't pirated, to make sure that your door to door Intel chip salesman didn't show up.

The concern there is that checking consumes computer resources, resources for which the purchaser paid. It slows the performance down, and that's why we've tried to use encryption to cause a separate space within the computer. This is the protected content space. If you're deliberately accessing that, you got to follow all the rules.

And this is the open space. Get back to work; keep driving America's economy.

Mr. VALENTI. I'll answer your question, Congressman Cox. Yes, I'll go along with Congressman Boucher. Let's just take the language of 1201(k) as it applies to analog and apply it to digital, and you got a deal.

Mr. MORADZADEH. Which would slow down computers.

Mr. COX. Do you want to respond to the complaint that it would slow down computers?

Mr. VALENTI. Well, as Mr. Emerson once said, for every loss there's a gain, and for every gain there's a loss. That's what negotiations are all about. I think the computer industry would not be for that, but as Mr. Boucher said, it's good enough for analog and DMCA. Let's make it for digital, same language, and we'll abide by it.

Mr. COX. Mr. Harter?

Mr. HARTER. Right now the DMCA has a 2-year hold on encryption research provisions of legislation while the Office of Copyright and the Commerce Department look at what came out of this Congress a year ago, and EMusic and a dozen other companies have filed comments in this public process. From what I can understand, the Office of Copyright and the Department of Commerce are nearly done with their analysis of these comments, and it will be interesting to see this committee react to the findings produced by this several month long study.

Encryption research, as an exception to the penalties for circumvention of copyright protection mechanisms, is a very important issue. It's kind of a Catch 22, in a sense, that if we somehow fetter the ability of ethical hackers and security experts to really understand what works and does not work in security, then this country will lose its competitive advantage in leadership in information security.

We know from the export control on encryption debate that, if we bottle up U.S. industry and U.S. expertise, experts overseas, including ethical as well as bad actors, will have supremacy in this key technology, and any copyright protection mechanism we may invent and put into the market here will be attacked by people who are more expert overseas and not subject to our laws, necessarily. Those people will not care about our trade surplus or trade deficit.

So I think this issue of encryption research in the context of the very important issue of circumvention in the DMCA should be looked at closely as the Department of Commerce and Office of Copyright come back to this Congress with their findings.

Mr. COX. I thank you. I think my time has expired. If anybody else wishes to answer the only question I've put, I'd like to hear the answer.

Ms. ROSEN. Since I'm the only woman at the table, I'll continue with my Pollyanna theme here and say that I think that the DMCA is working just fine. The marketplace is on its way, and there may be a video resolution that I'm certainly not party to, but with respect to music, we're doing fine, thank you very much.

Mr. TAUZIN. I think Mr. Klein wanted to respond.

Mr. KLEIN. Yes, just quickly, Congressman Cox. I have to agree with Mr. Moradzadeh in the sense that legislation frees this tech-

nology, whereas licenses can always be renegotiated and changed, depending on the circumstances. The DMCA itself encouraged licenses. So I believe that's the way to go.

Mr. COX. Well, I would almost agree with your statement that regulation frees this technology. It certainly does, if we're not technology neutral in our legislation. If we follow Rhett Dawson's point No. 3, which is regulate the behavior, not technology, we can probably avoid that pitfall. But your point is well taken.

Mr. DAWSON. Could we answer more fully for the record to you?

Mr. TAUZIN. Absolutely. We'll keep the record open for the next 2 weeks and give you good time to respond in writing. Also, Jack, if you want to rewind and revise, you can always do that, too, in the next 2 weeks.

Mr. COX. Rewind and revise?

Mr. VALENTI. You've entered a whole new phrase into the vocabulary now, Mr. Chairman.

Mr. TAUZIN. I thank the gentleman. The gentlelady from California, Ms. Eshoo, is recognized.

Ms. ESHOO. Thank you, Mr. Chairman. I want to use an analogy, and I'm glad that my staff is doing much better than I am, because they had two \$100 bills on them. I want to hold them up.

Here is the older version with Benjamin Franklin on it. Here's the old one. Here's the new one, enlarged visage of Mr. Franklin. Now the Federal Government does not have a reputation for being tremendously efficient, but if the Federal Government can assure the authentication between the old and the new—they could develop this—why can't the leading U.S. industries do the same?

You know what the implication is here, you know, the major threats to counterfeit copies, piracy. You've led with your testimony on that, Mr. Valenti. If we can do this, why can't the industries?

Mr. VALENTI. Well, I'm not a technician. I've established a strategic technology committee of technical experts. We've got a chief technology officer who is every hour of every day consulting with people like Intel and MIT and IBM and others, all trying to search for the right kind of protective shield that would allow us to protect our product, precious product. But again, we have to have a rapport with the people who do the machines, so that whatever technology that is formulated and designed would have response from the people to whom this material is going.

So, yes, I think it can be done. We're on the cusp of it right now, and I think these negotiations going forward, we can come to a conclusion shortly, I hope. But as I said, both sides are acting in good faith. There's no deliberate attempt to slow this down, but I think we can do it.

Ms. ESHOO. If you have to characterize how close or how far apart you are, how would you do that?

Mr. VALENTI. Congresswoman Eshoo, I really hope you allow me not to answer that question, because that's part of the negotiation.

Ms. ESHOO. I'm asking you to give us some hope here, because I think that we did a good job.

Mr. VALENTI. Well, yes—

Ms. ESHOO. I think we did a good job. I'm interrupting you. I'll give you, obviously, time to respond. I think that we did a good job in establishing the architecture of the law, so to speak. But again,

I think that I speak for probably all of my colleagues here, that the market needs to establish the rules of the road.

So what I'm asking you: Are you—you know, do you have the—you're close?

Mr. VALENTI. Well, we could settle it tomorrow if we just applied the analog protocols and 1201(k) to digital, and that would solve it all. But what the issue is, and that's as much clarity as I can give you, is one of the problems is that the VCR people, manufacturers, and the computer industry are really trying to impose their licensing terms on us as to how we protect our material.

We don't try to tell the computer industry or the VCR people how to make their machines. Therefore, we don't think they ought to try to tell us what we can try to protect and what we can't protect. Our very existence depends on that, both as a national resource, i.e., surplus balance of trade, but also for the continuation of this extraordinary and dazzling thing called the creative community of this country.

So that's what it's all about. We are narrowing the gap, but it all comes down to, if you go along with imposing the analog protocols and just turn it and make it digital, the ball game is over.

Ms. ESHOO. Let me ask if Mr. Moradzadeh would like to respond to that.

Mr. MORADZADEH. Yes, thank you. This discussion that we are in started, at least for the computer industry, in 1996 when Mr. Valenti showed up with a legislative proposal that we would effectively make all of our products illegal, that they would be taken off the market, and that there would be no market for computers until they were all revised to check for a certain set of bits within a movie.

So we've been talking in a space since then that has been not really fully free market. Free market would have called for computers to go on forever doing what they are doing, and other devices doing what they are doing.

What we reached instead was a compromise, was an agreement that we would use encryption to create sets of content for which we would check the propriety of the content, the status of the content—doesn't even belong on that system—and for other content there would be no obligations.

Now we have heard Mr. Valenti say that the framework in the DMCA sounds like it's pretty good. There are, of course, two pieces of 1201(k), one being confirming the consumer expectations, and the other being mandatory response on VCRs.

Within the 5C license we intend to confirm those consumer expectations, and for content delivered via 5C we have the mandatory response to the signals within the 5C signal. But, remember, this is an encrypted flow. It is a flow that, therefore, can be segregated and treated separately in the computer without burdening the rest of the computer, without burdening the rest of the Internet industry.

A second point, though, that I would make is entirely apart from 5C. We believe with the movie industry that it is valuable to find ways of combatting piracy. I'm meeting with the chief technology officer of the MPAA on November 5 in my offices in Santa Clara

to explore a number of ways of going about that, and I know that other meetings are going on.

We are committed to preserving intellectual property. We're one of the biggest intellectual property companies, as part of one of the biggest intellectual property industries in the world. We absolutely believe in this. There's just some ways of going about it that don't work.

Ms. ESHOO. Thank you. I think my time has expired, Mr. Chairman. Thank you.

Mr. TAUZIN. The Chair thanks the gentlelady. The gentleman from Ohio, Mr. Sawyer, is recognized. Did I get the order wrong? Let me make sure. It's Ms. McCarthy. I'm sorry. I'll get to the gentleman later. The gentlelady, Ms. McCarthy, is recognized.

Ms. MCCARTHY. Mr. Chairman, I want to thank you for having this hearing today.

I come to this issue—and I want to thank all the panelists, too; I've learned a lot. I come to this issue from an interesting perspective, because, of course, I put the rights of the artists foremost in decisions that I make in that regard. But, Ms. Rosen, I did read your testimony, like other members questioning you today, and I found it so "uppy," I felt what is the problem here, because your industry has really reached out and sought solutions and is moving forward, and it's showing what's possible.

Mr. Harter, I visited with your CEO when I was out in Silicon Valley last summer, and I was blown away by EMusic. I came home talking about it and raving about it and thinking this is the future.

So I'm listening today, and I'm wondering, along the lines of Mr. Boucher who questioned you well over an hour ago about the solution. Since the music industry has taken a lead, seems to me others could learn from your successes.

You know, how do we get to the solution for my guy out in Independence, Missouri, who is just trying to sell digital TVs, and I get this letter from him. He's frustrated. I mean, we're pushing this technology. We're trying to get everybody moving in that direction, and he sees the potential for the market, and he wants to take advantage of it. But the consumers are concerned, because they won't have the same application right now.

Isn't the solution to what we all want, which is competition, which is making sure we can compete globally with the technologies and the products that we have with the artists that we revere—isn't it right here at this table today?

Seems to me, just listening to you today, we are getting much closer to an understanding of what's possible and doable and what the consumer wants. So I really look to you for—I guess, with the larger question, is there anything we can do here in the Congress to help toward this solution?

Ms. ROSEN. An excellent question, and just from an outsider's perspective, it seems a little disingenuous for some people like Mr. Klein and others to come to the committee complaining about the attitudes of the entertainment companies. Yet what they don't want is legislation to fix the problem.

So I think that it is appropriate to have these discussions in the marketplace. To try and engage Congress in a dispute over licens-

ing terms seems sort of silly. Nonetheless, I think that you can take some comfort from the music experience, and that is that in essence we have lived over the last 3 years with what all these companies on the motion picture side and the hardware side are going to be living with soon in motion pictures as bandwidth expands.

The consumers are not begging for motion pictures online, because their bandwidth would make a 2-hour movie a 15-hour movie right now. So in essence the marketplace is moving, and there are opportunities there to have responsible, reasonable solutions; and as the opportunities become clearer for the technology companies, as it has in music, I think you will also see a more common understanding among the two industries such, as you described, we have experienced.

From my perspective, the best thing that you can do is continue to have that perspective of encouraging marketplace solutions and not falling into the trap that Mr. Boucher fell into before he left, which is, well, will you agree, will you agree, will you agree; yes, fine, we'll agree; oh, but no legislation.

So the point is probably no legislation. You know, let the marketplace work.

Ms. MCCARTHY. Well, I'm not an advocate of passing laws just to pass laws, and I agree with you. I'd rather that we not have to do anything, but I watched the technology today, and it's there, and I applaud you. It seems to me that solutions are out there.

Mr. Valenti?

Mr. VALENTI. Congresswoman McCarthy, one of the things that we all, unfortunately and lamentably, have to understand, is there's a lot of technical people tell me that the digital standards here don't work. You can't receive it with rabbit ears. There are a lot of people who want to go to the European standard, because our digital standards, according to a lot of people, don't work. That's one of the problems.

When your retailer says why don't I have digital, well, that's one of the problems. He doesn't. But I can tell you this. We're not standing in the way of it, because it's to our long range advantage to protect our property and to make it available to consumers all over the country as soon as possible. But it's the digital process itself in this country that is under high criticism.

Ms. MCCARTHY. Would anyone else like to weigh in? Thank you, Mr. Valenti.

Mr. MORADZADEH. I think, in many ways, this subcommittee has done our industries and the public a service by giving us a place to bring some of these issues out. There is a public policy to try to advance digital services in this country and to make it happen perhaps faster than the market would make happen all by itself.

That's one of the reasons that we felt it was important to come report to you on some of the activities that we've been doing to make that happen. Over the next year you'll probably hear reports from other segments of the industry that may be running into similar problems as they grapple with these same issues in delivering digital content.

So in terms of allowing us to explain what's going on in our segment, perhaps we have also been able to provide more background for the next set of issues that come up.

Ms. MCCARTHY. Well, I thank you. I appreciate the technology that you have developed and the wisdom that you've brought today to the committee. Does anyone else want to comment? Yes, Mr. Moore?

Mr. MOORE. Yes. I think that the difference between the video and the audio industry is that there is a lot more push from independent artists in the audio industry, music on the Internet through MP3, that gave the recording companies the impetus to actually come to SDMI and make reasonable compromises.

What I hear today is that, just in this little bit, the movie industry may not have that same incentive. There aren't independent movie producers that put \$200 million movies on the Internet and let people download them for free. So there is no real—and the artists that make the movies don't really have so much of an interest in getting digital distribution out there either, that the corporations that control the distribution of movies may not have the same motivation that the RIAA's members did.

Ms. MCCARTHY. Well, as someone who loves movies and loves to go to film festivals but can't always get there, I would love some of these independent movie makers to have other opportunities to get those movies to the viewer. But I agree with what you've just told us and the incentives there.

I just—you sit here, and you just want to make it work, because it's a good law, and the future is so full of promise. I'm grateful to all of you today for sharing your thoughts.

Mr. Chairman, again thank you for bringing us altogether on this. In the end, it's all about the artists and the consumers, and we need to work together to see that their needs are met.

Mr. TAUZIN. I thank the gentlelady. If everyone in this whole issue were as kindly and nicely spoken as Ms. McCarthy, we probably could work this out this afternoon. Thank you very much.

The gentleman from Ohio, Mr. Sawyer.

Mr. SAWYER. Thank you, Mr. Chairman. Sitting here listening to this discussion, I am reminded of those things that, I think, I enjoy as much as anything about the products, the intellectual products that each of you represent. That is that, particularly with film but almost equally with live concerts, it is the human experience that makes it an extraordinary shared event.

Watching a film on television is wonderful, but it's nothing like sitting in a dark theater with an audience of people who share your reaction and whose reactions feed upon one another. It's not quite as obvious in a concert of whatever kind, but I think it's there, nonetheless. That's one of the things that would be lost if we don't find a way to solve this problem.

When I came in Mr. Klein was talking, and he described that he had hoped that there would be a kind of working together, but he then described what he thought was not what he had in mind in terms of what you had hoped for in working together?

Mr. Klein, could you tell us briefly what you did have in mind?

Mr. KLEIN. Well, we are working together in what we call the CPTWG. It's a monthly meeting out in Burbank between the infor-

mation technology, consumer electronics, motion picture association.

We send people out there every month. They send people out there every month. There were engineers meeting there developing these technologies that will protect content over digital interfaces.

At the Consumer Electronics Manufacturers Association we have standards committees that are open committees, including members of the entertainment industry, that are working on standards, digital standards for copy protection.

Mr. SAWYER. What did you mean by saying that the work had been going on for the last 2 years was not what you had in mind?

Mr. KLEIN. What I meant was changing the rules of the game to what was agreed to 2 years ago in terms of encoding rules which now appear to be backed away from. When we were negotiating the digital video recording act, he originally had rules by which the encryption or the encoding would be followed, which allowed copying under certain circumstances, no copying under other circumstances.

Now, while we want essentially those rules carried through into this digital encryption stage, it appears that the other side has backed away from that agreement. I believe that's what you are referring to.

Mr. SAWYER. That may be what I'm referring to. I was trying to get a sense of what you were referring to.

Mr. Valenti, why didn't that work?

Mr. VALENTI. Mr. Sawyer, I just suggested a solution to this, and that is to take what the Congress has already passed in DMCA, the protocol and rules applying to analog, and lifting that language and apply it to digital.

Mr. SAWYER. Mr. Moradzadeh, you've been a pretty reasonable guy sitting here. If I were to ask you to be the mediator in all of this, where would you lead us?

Mr. MORADZADEH. I should disclose that I am on one side, but I'll try to mediate for a second.

I think the first thing I would do is bring out the very clear point that in Mr. Valenti's straightforward statement, there is a bit of a surprise.

Mr. SAWYER. Is that the same "this" as Mr. Stearns mentioned?

Mr. MORADZADEH. No. This is a different surprise. The point is this. The reason we got into this whole debate—we have become exquisitely familiar with the Burbank Airport Hilton—is that we have been working on——

Mr. SAWYER. This is a four-star destination?

Mr. MORADZADEH. It's a forced destination, yes. We have been working on a way of protecting content by encrypting it and delivering it in order that we can provide protection, on the one hand, without burdening the whole information industry, on the other.

What isn't clear from Mr. Valenti's proposal—and if he's offering that as a legislative proposal, maybe we discuss it here—is whether he is trying to now go all the way back to a proposal that would say every computer all the time, before it does anything from checking your E-mail to creating a greeting card to working, must check every bit of information that flows through it, just in case—just in case it's pirated.

What we've said is we will sign up for the existence of whole classes of information that, before you take the overt step of getting into them, you got to check. You got to be honest. You got to look and make sure that it isn't stolen. And those will be great, but that's it.

Mr. SAWYER. Thank you. And I have to tell you that what you just said put a lot of this other conversation into much better perspective for me. I really appreciate that very much.

Thank you, Mr. Chairman.

Mr. TAUZIN. Thank you, Mr. Sawyer. We are going to wrap. Let me mention a couple of things. First of all, one is that I'm not sure we on this side of this room have anywhere near the understanding of the complexities, technology and policy that you're trying to work out for us.

I can tell you this. We have a pretty good sense of people or we wouldn't be on this side of the room. My knowledge of people tells me that I don't know very many homeowners who, with an apple tree that overhangs their yard from their neighbor's yard, is not going to pick any apple that falls on their side of the property line.

Whatever you want to call consumers, describe their insatiable appetite for these wonderful products that are produced or call them bad names or not, if you drop those apples onto their computer and they can get them, they're going to get them, and they are going to enjoy them, and they are not going to ask where they come from or how it got there.

That's the nature of, you know, the problem. So it's got to be solved in a way that honestly protects those of you who produce these products, at the same time recognizes that human nature is that, if I know there's a Website on my computer that I can get a movie, Jack, that's not out yet and I can see it at home and just run a wire from that DVD copy I make over to my big screen television, I'm in hog heaven.

Consumers do that, not because they are crooks. It's just the nature of that apple falling from the tree in their backyard. They are going to pick it and eat it.

The second thing, Jack, is that I promised you a long time ago that I would give you a copy of my rendition of George C. Scott's "Patton." The staff has labeled it copy protected. I don't think it is. It's a bad copy of George C. Scott's acting ability, but it's a lot of fun. So I have it here for you, Jack.

Let me thank you all and—there's no royalty on the tape, I don't think. Let me thank you all. There is a full committee meeting at one o'clock, mark-up at one o'clock, and I will ask those of you who have demonstration products to please clear them as quickly as you can.

My thanks to all of you. I think the last comment Mr. Sawyer made is pertinent here. You have clarified a lot of what's happening. I don't know that we have resolution yet, but we have a clearer understanding.

One final word is that I think Ms. McCarthy said it best. We don't want to legislate for the sake of legislating. It would be much better if this can be resolved in a way that works for you and, at the same time, protects consumer expectations as much as possible, so that we don't have to come back and revisit it with legislation.

I would encourage you to even spend more time at the Burbank Hilton.

The record will remain open for 2 more weeks. We thank you. The subcommittee stands adjourned until Wednesday.

[Whereupon, at 12:42 p.m., the subcommittee adjourned.]